



BADGER STATE Smoke Signals



Serving Amateur Radio in Wisconsin

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Telegraphers Click at Snow Train '87

Bob King, KA9GNY
411 Lynn Avenue
Baraboo, Wisconsin 53913

On Saturday and Sunday, February 21 and 22, the Morse Telegraph Club teamed up with the Mid-Continent Railway Museum at North Freedom, Wisconsin for "Snow Train '87." Although there was no snow to plow, a good time was had by all. Museum officials report nearly 2300 passengers were carried the two days.

Morse Telegraph Club members had a gay old time dispatching trains, sending complimentary telegrams for the public, and explaining to the kids what all those crazy "clicks" were about.

Participating "dual" Hams were Bill Dunbar, AD9E, of Normal, Illinois (president of the Morse Telegraph Club and Editor of that club's paper Dots and Dashes); Sid Vaughan, NØDJD; Bob King, KA9GNY; and Fred Becker, W9KKM, and "pure" Morse operators Dean Ott, Jim Pollard, Verne Humb, and Marc Den-
een.

Two circuits were set up, one using 147.5 MHz FM (with converters operating the telegraph sounders) and one pure land wire Morse circuit between the freight house and the passenger station. About 100 messages were handled. K9ZZ dropped in for a visit and on his way out he used the key pad on his HT to send us a short message.

Coming events for the club will include the last Saturday in April (25th),



which commemorates the birthday of Samuel F.B. Morse. This will be the day all the U.S. and Canadian chapters are hooked together by land wire by Western Union. This will be held in the waiting room of the passenger depot at the Mid-Continent Railway Museum at North Freedom. All Hams and any others who are interested are welcome to attend.

On Saturday and Sunday, May 24th and 25th, a Special Events station will be operated from a trailer just west of the depot at Mid-Continent in North Freedom. The May issues of QST and CQ Magazine will carry announcements of this event in their contest sections. The station will operate from 1500Z to 2300Z on 80 thru 10 meters, depending on what bands are open, CW only, 44 KHz from the low end of the bands plus/minus QRM. The station call will be AD9E. This event will commemorate the sending of Morse's first message "What hath God wrought," which took place on May 24, 1844.

If you work us and wish to have a very special QSL card, send your QSL and an SASE to me at my address above. We would be happy to have any Hams come in and give us a hand.

This photo shows Mid-Continent's locomotive #1385 leaving the North Freedom depot for La Rue and return during Snow Train '87. More photos, showing the telegraphers, are in this issue.

MARA Swapfest Special Issue

April 5, 1987 - Dane County Forum Bldg.

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Badger State Smoke Signals

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Swapfests and other Social Events

Saturday, April 4, 1987. The Rochester MN area Hamfest, sponsored by the Rochester ARC, at the John Adams Jr. High School, 1525 N.W. 31st St. Doors open at 8:30 a.m.

Sunday, April 5, 1987. The annual Madison Swapfest sponsored by the Madison Area Repeater Association will be held in the Dane County Expo Center in Madison, WI. Doors open at 8:00 am. Electronic equipment and components, for hams computer hobbyists & experimenters. All you can eat pancake breakfast. Beef bar-b-ques - hot dogs. Admission \$2.50 in advance or \$3.00 at the door. Tables \$5.00 in advance or \$6.00 at the door. Table reservations do not include admission price, you must buy a separate admission ticket. Reserve your tables early as they sell out every year. We urge you to carpool as the county charges a parking fee. For advance reservation or information on exhibitor booths contact: MARA, Box 3403, Madison, WI 53704. See the ad in February BSSS and support this Badger State Booster.

Saturday, May 2, 1987. Ozaukee Radio Club's Ninth Annual Swapfest at the Circle B Recreation Center (Intersection of Highway 60 and County I) in Cedarburg, WI. ARRL sanctioned, plenty of free parking, food, refreshments. Bowling, and game-room available. Advance Tickets \$2.00 (\$3.00) at the door. 4-foot tables \$4.00. It is recommended that tables be reserved in advance. Contact O.R.C. Swapfest Committee, 101 East Clay St., Saukville, WI 53080. (Include business size SASE.)

Sunday, June 21, 1987. Stevens Point, WI, Swapfest and Picnic.

Saturday, July 18, 1987. South Milwaukee Amateur Radio Club's Swapfest "87" in Oak Creek, WI.

Saturday, August 15, 1987. The Green Bay Mike & Key Club Swapfest.

Sunday, October 25, 1987. Kettle Moraine Radio Amateurs Ham, Computer, and Video Fest at Waukesha, WI. Contact: KMRA, 313 Hillview Circle, Waukesha, WI 53188

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas.

Send information on your event to Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages, and/or we can include your flyers. For information on rates and requirements for our advertising pages, and/or for including flyers, please contact K9ZZ or K9EN.

Club Meetings

BADGER AMATEUR RADIO SOCIETY (W9YT - UNIVERSITY OF WISCONSIN - MADISON)

Regular monthly meetings are held at 7:30 PM on the 2nd Wednesday of every month while school is in session, in B314 Electrical Engineering Building.

CENTRAL WISCONSIN RADIO AMATEURS, LTD. (STEVENS POINT)

Regular club meetings are held on the second Wednesday of the month.

Eau Claire A.R.C.

The Eau Claire Amateur Radio Club meets on the second Tuesday of the month at the Parks and Recreation Building at Oxford and First Streets in Eau Claire. Meeting time is 7:30 P.M. Hams and guests are welcome. Travelers in the area are invited to use the club's wide-area repeater K9UXP on 146.31/91.

FOUR LAKES A.R.C. (MADISON, WI) RED CROSS BUILDING, 4860 Sheboygan Ave, Madison, WI., first and third Tuesday each month.

FOX CITIES AMATEUR RADIO CLUB Regular meetings at 7 pm, the third Monday of the month at Roosevelt Jr. High School, 318 E. Brewster St., Appleton, WI 54911. 424-735-6294 for info.

GREEN BAY MIKE & KEY CLUB The Green Bay Mike & Key Club meets the 2nd Thursday of each month at the American Red Cross Bldg., corner of Danz and Deckner in Green Bay.

GREEN FOX AMATEUR RADIO CLUB Meetings are held the third Monday of the month at 7:30 p.m. at the Green Lake Town Hall

KETTLE MORAINE RADIO AMATEURS

All meetings are held on the SECOND (2nd) Friday of each month.

MANITOWOC COUNTY RADIO AMATEURS

First Wednesday; 7 p.m. at City Hall, 817 Franklin St, Manitowoc, WI.

Second Wednesday; Red Cross Building, 1816 Washington St., Manitowoc, WI.

MILWAUKEE RADIO AMATEURS CLUB

All regular meetings of MRAC scheduled at Wauwatosa Savings and Loan Building, 7500 West State Street, will be held on the second Thursday of the month.

OZAUKEE RADIO CLUB

Meetings held every second Wednesday at 7:30 p.m. in the Saukville Community Center

RIVERLAND AMATEUR RADIO CLUB

Regular meetings are held at 7:30 P.M., on the first Tuesday of each month in the Onalaska Community Center in Onalaska, WI.

ROCK RIVER RADIO CLUB

The RRRC holds it's regular monthly meeting on the first Tuesday of the month at 8 p.m. The club meets at the Dodge County Sheriff's Dept. 141 N. Main in Juneau WI.

SHEBOYGAN COUNTY AMATEUR RADIO CLUB

Regular club meetings are held on the Second Tuesday of each month, at 7:00 P.M. at the Sheboygan Red Cross/Boy Scout building located at 2032 Erie Ave. in Sheboygan.

SOUTH MILWAUKEE AMATEUR RADIO CLUB

Meetings held at Legion Post 434, Shepard Ave., Oak Creek, on first Wednesday of the month. Auctions held at March and October meetings.

WEST ALLIS RADIO AMATEURS CLUB

Regular meetings are held on the second Tuesday of each month at St. Francis Savings, 9330 W. Greenfield Ave., at 8:00 P.M.

THE WISCONSIN VALLEY RADIO ASSOCIATION, WAUSAU Holds regular monthly meetings on the first Tuesday of the month at 7:30 p.m. The location varies, but information is available on the 146.04/64 repeater in Wausau.

YELLOW THUNDER AMATEUR RADIO CLUB (BARABOO, WI)

All regular meetings of YTARC are at the Baraboo Civic Center. Meetings start at 7:30 P.M. Monday meetings are held in room 20. All others in Room 25.

Meetings dates for 1987 are: Thursday, Apr. 16; Monday, May 18; Tuesday, June 16; Wednesday, July 15; Thursday, August 13; Monday, September 14; Tuesday, October, 13; Wednesday, November 11; and Thursday, December 10.

Let us know of your club meeting dates, and we will let others know of your meetings and activities. There may be Amateurs in your area interested in joining your club, or members of other clubs interested in making an interclub visit.

When your mind goes blank, turn down the audio.

The TEST POINT



The following are known locations where Amateur Radio license examinations are scheduled in the Badger State area.

April 4, 1987	Milwaukee, WI
April 18, 1987	Waukesha, WI
April 18, 1987	Minneapolis, MN
May 2, 1987	Madison, WI
May 16, 1987	Waukesha, WI
May 16, 1987	Robbinsdale, MN
May 20, 1987	Milwaukee, WI
June 6, 1987	St. Paul, MN
June 21, 1987	Stevens Point, WI
June 27, 1987	Waukesha, WI
July 18, 1987	Minneapolis, MN
August 9, 1987	St. Cloud, MN
August 29, 1987	Annandale, MN (Robbinsdale ARC)
September 19, 1987	St. Paul, MN
September 26, 1987	Wisconsin Rapids, WI
October 17, 1987	Minneapolis, MN
November 7, 1987	Richfield, MN (Robbinsdale ARC)
December 5, 1987	Stevens Point, WI
December 19, 1987	St. Paul, MN

Monthly, First Sat. Racine, WI
Monthly, Third Sat. Loves Park, IL

GENERAL RULES FOR ALL EXAMINATIONS:

All examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs may permit walkins. Check with sponsor to find out if they allow walkins.)

To register for these examinations, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from the FCC Field Office, the ARRL or Badger State Smoke Signals. Send a 22¢ SASE if you request one from the ARRL or BS55. In most cases, forms can also be obtained from the sponsoring group. Remember-- you must file at least 30 days in advance unless otherwise indicated.

ARRL/VEC examinations require a check for \$4.35 payable to "ARRL/VEC".

The FCC now requires applicants to show their original Amateur license to the VEC. As in the past, a copy of your license must be attached to your FCC form 610.

Additional information is given below.

session, and exams you wish to be tested for. Send the card to Syl Janczak, WD9JKZ, 3127A West Madison, Milwaukee WI 53215.

Exams for shutins are given by appointment only.

MILWAUKEE METRO AREA TEST TEAM - MRAC/VEC

Saturday, April 4, 1987 - 9:00 a.m.

Saturday, May 20, 1987 - 9:00 a.m.

Room 256, Wauwatosa East High School at 74th and Milwaukee Avenue - use the east (74th Street) entrance. Note: 74th Street is a one-way south street.

Bring your original license and a good photocopy, a pen, and \$4.25 for the exam fee. Walkins accomodated if time permits.

Register in advance on a Postal Service 14 cent postcard; print the grade of license you are applying for, your name, address, and telephone number. Send to:

The Milwaukee Radio Amateurs' Club, Inc.
N50 W16328 Pin Oak Court
Menomonee Falls WI 53051.

MADISON WI - MAY 2, 1987 - ARRL/VEC

The exams take place at Fire Station No. 2, on Grand Canyon Dr. The exams start promptly at 8:30 a.m. and pre-registration is strongly recommended.

Contact: Art Albright at 249-0590

WISCONSIN RAPIDS, WI - VOCATIONAL SCHOOL

Contact: Gene Santoski, K9UTQ

1220 18th St., So.

Wisconsin Rapids, WI 54494

(715) 423-6368

STEVENS POINT, WI - BLUE TOP INN

Contact: Joe Larson, N9JW

644 Portage St.

Stevens Point, WI 54481

(715) 344-1182

RACINE, WISCONSIN - ARRL/VEC

First Saturday of each month except during summer and the Christmas holidays.

Exams are given at the Red Cross Building, 4521 Taylor Avenue, Racine WI 53405.

Bring your original license and a photocopy of it; also bring some form of photo identification, such as a Wisconsin photo driver's license, and a check for \$4.35 payable to ARRL/VEC.

Pre-registration at least 40 days before the test is desired, but walkins are permitted and will be accommodated until the extra supply of exams is exhausted.

Send pre-registration to: William R. Firchol, Jr., N9DMP, 1912 27th Street, Kenosha WI 53140.

Third Saturday of every month.

Northern Illinois Volunteer Examiners (DeVry VEC). Held at North Suburban Library on North Second Street in Loves Park, IL.

Contact: Gene Melton, AK9N

124 S. Chicago Ave. #2

Rockford, IL

(815) 229-7249

MINNESOTA TESTS

Gopher/Minneapolis ARC: Robbinsdale ARC:

Avery Finn, KØHLA

Ron Schultz, NAØU

P.O. Box 53

6308 Peacedale Ave.

Hopkins, MN 55343

Edina, MN 55424

(612) 448-5384

(612) 920-7473

St. Paul ARC:

St. Cloud ARC:

Jay Bellows, KØQBE

P.O. Box 141

997 Portland Ave.

St. Cloud, MN 56302

St. Paul, MN 55104

Leonard E. Carlson

(612) 222-7253

(612) 252-0414

LOCATIONS:

University of Minnesota Moos Hall, Washington and Union Streets, Minneapolis.

Medina Ballroom, Midwinter Madness Hamfest, Medina, Minnesota.

St. Luke's School, 1005 Summit Ave., St. Paul, Minnesota.

North Memorial Medical Center, 3300 Oakdale Ave. N., Robbinsdale, Minnesota.

Minnesota State Fairgrounds, Amateur Fair '87 Hamfest, St. Paul, Minnesota.

St. Cloud, Minn., Annual Hamfest.

Handi-Hams Camp Courage, Annandale, Minnesota.

Richfield, Minnesota, Hamfest Minnesota and Computer Expo.

(ed note.) Thanks to Marv Mahre, WØMGI for the Minnesota information. If you are interested in any of the Minnesota tests, we suggest that you save the above information as we may not be able to have the complete list in every issue of Smoke Signals.

This section of Badger State Smoke Signals is available to publicize your Volunteer Examiner Amateur Radio license examination schedules.

Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to K9EN or K9ZZ at the address shown on page 2.

MISCELLANEOUS MISCELLANEOUS MISCELLANEOUS

Oh what the heck -- items of interest:

Central Wisconsin Radio Amateurs Ltd.

(Stevens Point)

WATTS SNOO

Bob Baird, W9NN, is in Cocoa Beach, Florida. He continually complains about the heat. The beach sand is too hot to walk barefooted on, etc. If he would stay in Plover, he wouldn't have those problems. He is looking for contacts with his local pals on 20 meters. 14,238 KHz. at 8:30 am on Monday, Wednesday, and Friday.

MILWAUKEE VOLUNTEER CORE GROUP - De Vry VEC

The following exam sessions will be held in rooms S0207 and S0225 at the Waukesha County Technical Institute:

April 18, 1987

May 16, 1987

June 27, 1987

Walkins are welcome at all exam sites. Free coffee served only at WCTI. Exams begin at 9:00 a.m. at all sites. Novice through Extra Class exams will be given. Please bring your current license (if any) as the examiners are required to look at it.

If you are interested and wish to register for an exam, please send a post card with your name, address, phone number, date of the test

Central Wisconsin Repeater Association (Baraboo/Madison)

Gari, NG9V, and Jim, WB9UQT, were elected to the Board of Directors without opposition. The club is considering the addition of a 220 MHz. repeater. Comments pro and con are encouraged.

Fox Cities ARC (Appleton) FC-ARC QSO'ER

The club has reached 97 members. It won't be long and we will most likely hit the "100" mark.

Green Fox Amateur Radio Club (Green Lake) FOXTALES

If you want the latest news from Arizona, you can usually catch Clarence, WA9YCV, on Mondays at 1 p.m. on 14.260 MHz. plus or minus QRM.

Tri-County Amateur Radio Club TRI-COUNTY TODAY

New officers for the coming year are: President, Art, N9TD; Vice President, Stan, N9FIB; Secretary, Carl, KW9W; Treasurer, Don, N9DEC; Property Officer, Stan, N9FIB; Repeater Committee, Stan, N9FIB, Art, N9TD and Carl KW9W.

Our thanks to the above mentioned clubs and their bulletins for the information presented. Badger State Smoke Signals will be pleased to exchange bulletins and information with your club. Please contact K9ZZ or K9EN.

FOR SALE: 75 assorted stamps. \$1.00 - choose U.S./foreign. Richard R. Regent, K9GDF, 5003 South 26th St., Milwaukee, WI 53221

Yellow Thunder

Amateur

Radio

Club

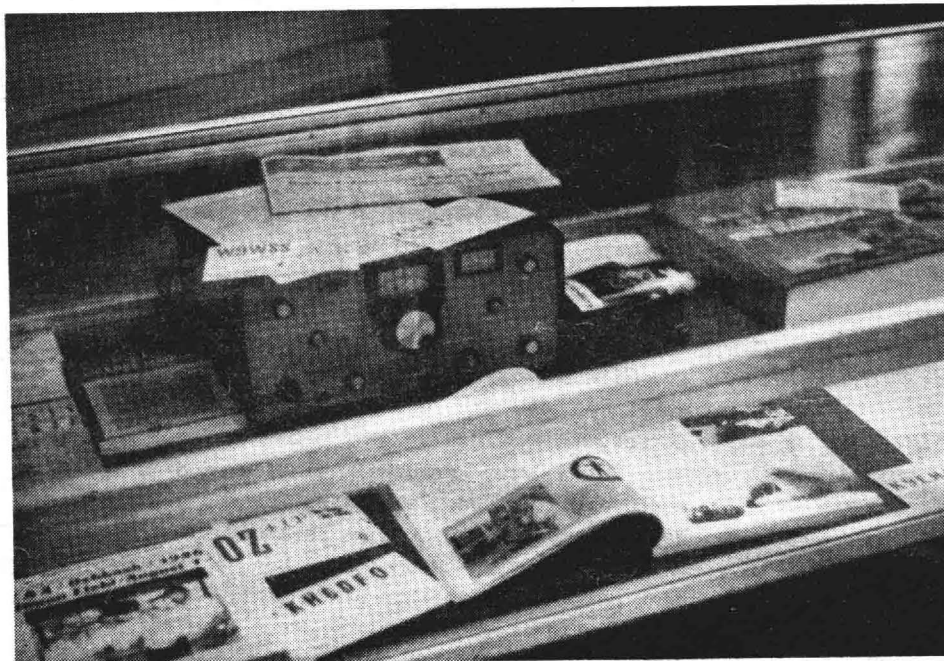


K9ODK
WB9FDZ

The February 17, 1987 meeting of the Yellow Thunder Amateur Radio Club, Inc. was called to order by the V.P. Art Kleefisch, W9WSS at 8:00 p.m.

Members in attendance were:

Harry Westlund, K9WHJ	Baraboo
Jim Decker, WB9UQT	Baraboo
Phil Anderson, W9TP	Baraboo
Harry Mayland, K9FFT	Baraboo
Harold Reif	Baraboo
Art Kleefisch, W9WSS	Baraboo
Ken Ebnetter, K9EN	Portage
Bill Klinkner	Sauk City
Jim Romelfanger, K9ZZ	Baraboo



The Yellow Thunder Amateur Radio Club was recently invited to put a display about Amateur Radio in the Baraboo Public Library. The picture on the left shows the display prepared by Art, W9WSS, and Harry, K9EHJ. The display shows the club's Century 21 transceiver, QSL cards, ARRL publications and even BSSS. Included with the display was an invitation to attend the Novice class now being held by the club. There are 6 active, interested students attending every Thursday evening at the Baraboo Civic Center. Prospective Amateurs are invited to drop by anytime.

--Photo by k9zz

The minutes of the last meeting were approved as mailed to the members.

Copies of the Treasurer's report for last year were handed out. The operating balance as of today is \$229.14.

Ken Ebnetter read some ARRL Newsletters on the latest Novice license and operating changes.

OLD BUSINESS:

The club had further discussion on the purchase of a frequency meter.

There was a report and discussion on the status of a possible Special Events Station for the Circus World Museum. After many pro and con facts were brought forth, it was decided we would abandon the project for now, due to manpower shortages.

Bill Klinker was the winner of the buck nite drawing and won \$6.00.

The meeting was adjourned at 8:55 pm so the program could be started.

The program was presented by Brad Pointon of Baraboo. He gave a demonstration of an IFR 1200S service monitor. This unit is capable of measuring output power, frequency, modulation, receiver sensitivity, and, with the built in oscilloscope and spectrum-analyzer, can check occupied bandwidth, harmonic and spurious outputs. Several HF and 2-meter rigs were checked for power, frequency, sensitivity and modulation.

Respectfully submitted,
Harry Westlund, K9EHJ

Birthdaze

Bennie Ranum	WB9QQG	April	23
William Klinkner		April	27

Sentence Sermon

I believe in an immortal soul. Science has proved that nothing disintegrates into nothingness. Life and soul, therefore, cannot disintegrate into nothingness, and so we are immortal.

--Wernher von Braun

The next meeting of the Yellow Thunder Amateur Radio Club will be held Thursday, April 16, 1987 in room 25 of the Baraboo Civic Center. The meeting will begin at 7:30 p.m. and will be followed by an audio-visual program from the ARRL.

The May 18, 1987 program will be on antenna noise bridge measurements, and the June 16, 1987 program will be on Field Day preparations.

A RADIO HAM WITH A MICRO MIND

From the Idaho Newsletter, Boise Id.
via ARNS

Contributed by K7BV

If you should see walking down the street
A man equipped with dipole feet
And a family of curves trailing along behind,
He's a radio man with a micro mind.

With micro seconds and micro waves,
And micro volts he fills his days
And there in the course of time,
He develops a micro mind.

His eyes take on a neon gleam
His ears extend to a Yagi beam
His mouth becomes another gate
And his heart pumps at a video rate.

This radio man through passing years
Obtained infinite impedance between the ears
He finally succumbed to a heavy jolt
When he got what he thought was a micro volt.

The doc looked up from his microscope
Turned to his colleagues and softly spoke
No trace of a brain can I find
He's a radioman with a micro mind.

The movement of trees creates the wind. It is obvious that when leaves and branches are still, no wind is produced.

SMall Talk

By Richard R. Regent, K9GDF
Section Manager
5003 South 26th Street
Milwaukee WI 53221

Q. What is the cost for an ARRL member to use the QSL Bureau?

A. The ARRL Outgoing QSL Bureau is one of the most popular membership services. Despite rising postage rates over the years, the cost is still only \$1.00 per pound. With approximately 155 QSLs per pound, that's less than a penny per card. The Outgoing Bureau staff of Joan Hushin, KA1FO; Joe Carcia, KA1DBK; and Peter Tolisano, KW1J, sorts, processes and then promptly forwards QSL cards to the foreign bureaus overseas at the rate of over one million per year.

Q. Why do some traffic handlers send two monthly Station Activity Reports each month?

A. Monthly individual traffic reports are effective summaries of activity levels and provide a means to give special credit to hard-working traffic handlers. A report, whether sent by message or mail, should

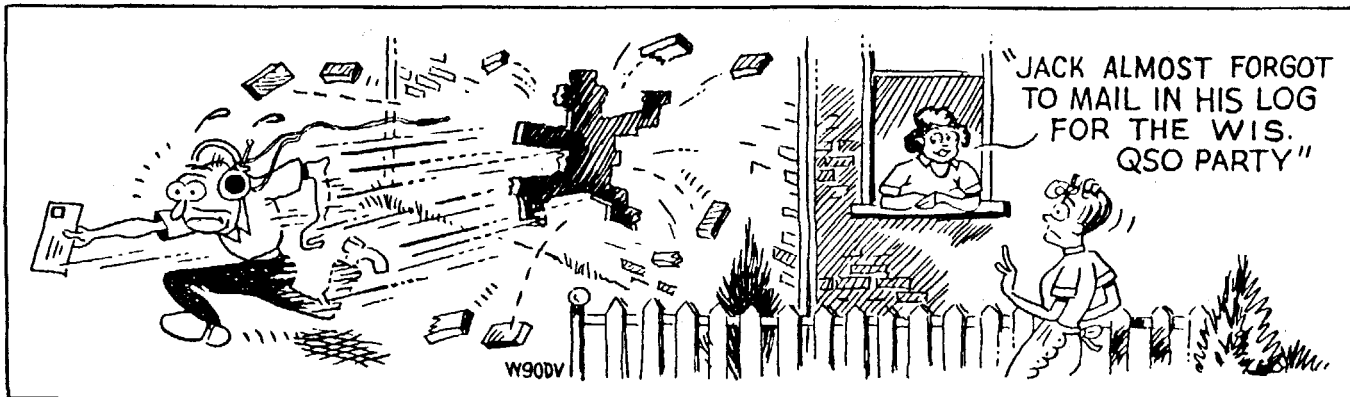
list the month of the report, and, in "ORSDT" order, note the points for messages originated, received, sent, delivered and the total. One report goes to me for listing in QST Wisconsin Section News or sometimes in newsletters. If the activity qualifies, it will be applied for a BPL award and listing. Because of QST printing deadlines, I should receive reports no later than the sixth of the following month. The second report goes to our STM, K9UTQ, to indicate station activity as a requirement to keep in good standing as an ARRL Official Relay Station appointee. By the way, a Station Activity Report (SAR) can include more information than just a traffic report.

Q. I'm a new Novice in Wisconsin and can only get on 80 and 40 meters CW. How can I get started handling traffic?

A. Dear traffic enthusiast. You're in luck. The Wisconsin Novice Net meets each evening on 3.723 MHz in the 80 meter CW band. It is an outstanding spot to learn about traffic handling, ask questions and join in on the fun. Don't worry about not knowing what to do or making a mistake because the operators there are helpful, slow senders and patient. The WNN Net Manager is Bruce J. Cadwell, N9DGL, N1715 Maer Circle, Shawano, WI 54166, phone 715-526-9883.

NEW FORMAT COMMENT:

WOW!.... GOLLY!.... GEE!.... GREAT!!!!
Congratulations on the latest "rebirth."
Keep it up. 73, Joe Imilkowski, W9CWD



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PROPAGATION PREDICTIONS

BY *Woody Minar* K9EF
13508 Tabscott Drive, Chantilly, Va. 22021

This writer has been anxiously awaiting each upcoming month to calculate the new monthly data to plot recent changes in the solar cycle.

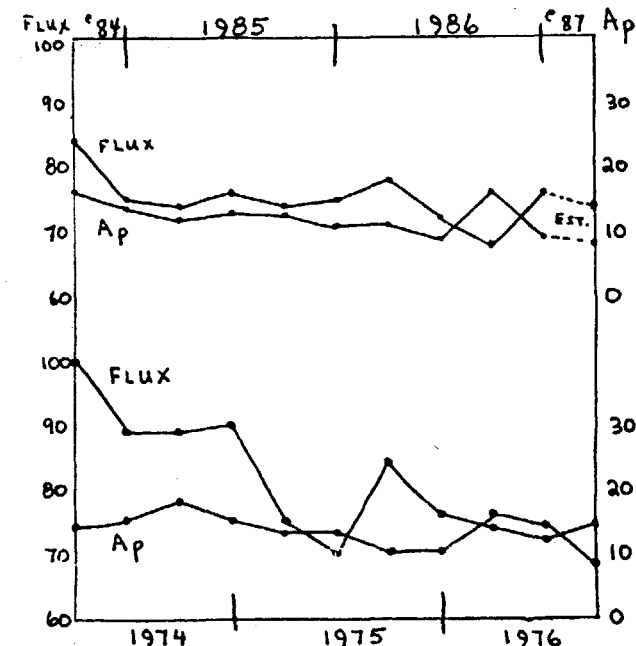
Although it is about six months too early to make a final judgement, preliminary calculations (using an educated call for March, 1987) indicate that the solar cycle probably bottomed in September, 1986.

The charts below show the Cycle 20 to 21 and Cycle 21 to 22 transitions. There are two plots of the Planetary Alpha index and Solar Radio Flux (one plot for 1974 through 1976 and one plot for late 1984 to early 1987). Notice the flurry of good propagation in the latter part of 1975 (high Flux and low Ap) prior to the transition in early 1976 (low Flux and high Ap) when propagation bottomed in early 1976. Compare this to the graph for 1984-87. Notice the Cycle 21 to 22 transition plot that a similar decrease in good propagation occurred in late 1986, although not as dramatic.

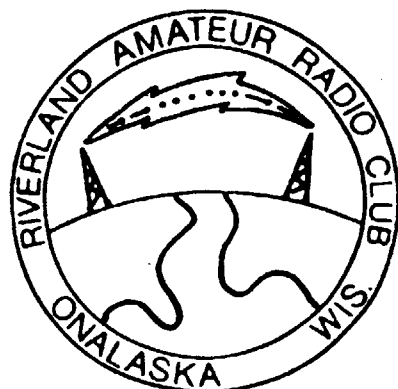
This, then, drives an early conclusion that 1986 was the year of the transition. If so, this equates to a 10.5 year solar cycle which is almost on track. However, we must be cautious in our conclusions at this time. The transition of high Ap and low Flux could actually be related to the mid-1975 transition and not to the final one. If this is true, then the transition should occur in April or May 1987.

Whatever the outcome, get ready for a quick rise in good propagation, slow retention, then slow decay to the bottom five years from now.

Here are my forecasts. Better than average days to be on the air are: April 23-24, May 6-8, and May 20-22. Bad days to be on the air are: April 15-17 (monthly low), April 28-30, May 13-15 (monthly low), and May 27-29.



CYCLE 20/21 AND 21/22
TRANSITION COMPARISONS



On March 3, 1987, the regular meeting of the Riverland Amateur Radio Club was called to order by President Gary Webb. Minutes of the February meeting were read from the Badger State Smoke Signals.

37/97 REPORT

This report was presented by Van, 'WA9FIO. There have been some signal strength problems lately. It has been determined that these are most likely due to missing radials from the antennas. Van suggested that the replacement antennas have tapered steel radials instead of aluminum. He asked for a general scrounging for suitable materials. Van also noted that noise from the tower strobes are noticeable during weak signal exchanges.

OLD BUSINESS

Craig Goldbeck, N9EDT, reported on the jackets and logos. Prices are less than before. Unlined, in quantities of 24-48, are \$12.75, lined are \$16.25 and a heavier version would be \$22.50.

The Hamfest Committee is still working on locations and time.

NEW BUSINESS

Kent, W9LZQ, sent these announcements:

1. Steve Thompson of the National Weather Service would like to attend the April meeting of the club and talk for a few minutes around 8:20 p.m. about Skywarn operation this spring and summer and maybe some tips on safety, etc. He would also be open to questions.

2. Bruce Zimmerman of NWS will be providing Skywarn training for Monroe county hams at the court house in Sparta the evening of Tuesday, April 7 at 8:00 p.m. If anyone is interested in becoming Skywarn certified, they are welcome to attend that training. Contact Kent, W9LZQ, at 783-8135 or 785-9453.

3. If enough hams in the area are interested in receiving the training at another time, Bruce will be willing to provide a session on an upcoming Saturday. Contact Kent by March 15. Also get in touch with Kent if you are interested in signing up to be a part of the Skywarn net.

4. WXOW-TV would like to conduct an interview on our Skywarn operation sometime next week. Of special interest would be someone demonstrating the operation of their mobile rig on 2 meters. This inter-

view will be part of "Tornado Awareness Week" that WXOW-TV will be focusing on. Again, get in contact with Kent.

Dick Kleppe, KØKTP, talked about the possible loss to commercial interests of 2 MHz or more from the 220 band. He urged all members to write to the FCC, and to that aid he passed around handouts that outlined a format for making effective comments to the commission. These comments must be in by April 6, 1987.

Dick also discussed the enhanced privileges for Novices. He feels that the club should investigate methods for getting more people into Amateur Radio. These enhancements could be very helpful in this process.

The meeting was adjourned at 8:15 p.m. Total members present was 23.

MEMBERS PRESENT

Bill Kleinschmidt	N9FDE
Craig Goldbeck	N9EDT
Gary Countryman	KD9RL
Tim Staffel	KA9SJI
Jack Yashizumi	W9KDT
Wid Johnson	W9DM
Art Osborn	WØJDC
Ernie Gershon	K9ZVU
Van Elston	WA9FIO
Duane Fruechte	W9HWQ
Phillip Long	KA9RLI
Herman Ludvik	W9HJV
Bill Winder	K9EGQ
Walter Altus	WD9GCR
Karl Olberg	W4ST
Ron Reed	KD9OY
Tom O'Brien	WB9BJQ
Jim Burcum	K9LBX
Gary Webb	NI9V
Greg Miller	KA9FOZ
Rick Williams	KV9U
Roger Reader	KA9BKK
Al Reinholz	N9FZE

GUESTS PRESENT

Dick Kleppe	KØKTP
Archie Sokolik	K9VQR
Maty Johnson	Curt Phelps
Lawrence E. Birdsong	Greg Treharne

HAM PLATES ON TRUCKS, RVs: UPDATE

A proposal to permit Amateur Radio call sign license plates on some trucks in the state of Wisconsin is now Assembly Bill 122 (see BSSS, January, 1987).

If passed, the legislation would permit call sign license plates on motor trucks having a gross weight of not more than 8,000 pounds and on farm trucks with a gross weight of not more than 12,000 pounds.

An amendment to include motor homes and dual purpose vehicles in the legislation has been requested by Reps. Terry Musser and David Travis. Currently, Wisconsin law allows Amateur Radio call sign plates only on automobiles and station wagon-type vehicles.

If you support this proposal, contact your Representative in the Wisconsin Assembly. Although the bill won't be acted upon in the Senate until it clears the Assembly, a note to your state Senator

would probably be in order as well. Since the Spring 1987 session is a short one, action may not be taken on the bill until this coming Fall.

Russ Fleming, WB9NYG, suggests that if your Assemblyman serves on the Assembly Transportation Committee, it is particularly important that you indicate your support to him or her. Here are the members of that committee, followed by their home county, home address, state capitol room number, and telephone number at the capitol:

Peter Barca (Kenosha) - 1520 Sheridan Rd., Kenosha 53140 - 18N - 266-5504

Don Hasenohrl (Committee Chairman) (Wood) - 9516 Bluff Dr., Pittsville 54466 - 35N - 266-8366

Alvin Ott (Calumet) N8855 Church St., Forest Junction 54123 - 411N - 266-5831

David Paulson (Polk) - Rte. 4 Box 75, Amery 54001 - 305W - 267-2365

James Rutkowski (Milwaukee) 11335 W. Woodside Drive, Hales Corners 53130 - 128W - 266-8590

Thomas Seery (Milwaukee) 6300 N 101st Street, Milwaukee 53225 - 23N - 267-7990

Robert Thompson (Columbia) Rte. 1 Box 300, Poynette 53955 - 13N - 266-3404

Joseph Tregoning (Lafayette) West Oates Street, Shullsburg 53586 - 7E - 266-7502

Cletus Vanderperren (Brown) Rte. 16, Green Bay 54303 - 32N - 266-0616

Esther Walling (Winnebago) 1225 Kluck Street, Neenah 54956 - 329W - 266-5719

Serving on the Senate Transportation Committee are:

Joseph Andrea (Kenosha) 2405 45th Street, Kenosha 53140 - 6S - 267-8979

Lloyd Kincaid (Committee Chairman) (Forest) 110 North Crandon Avenue, Crandon 54520 - 19S - 266-2509

Richard Kreul (Grant) 1955 12th Street, Fennimore 53809 - 310S - 266-0703

Joseph Leean (Waupaca) Rte. 1 Box 373, Waupaca 54981 - 419S - 266-0751

Rodney Moen (Trempealeau) 2119 Dewey Street, Whitehall 54773 - 37S - 266-8546

Marvin Roshell (Chippewa) Rte. 6 Box 331A, Chippewa Falls 54729 - 134S - 266-7511

Brian Rude (Vernon) 307 Babcock Street, Coon Valley 54623 - 319S - 266-5490

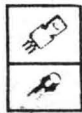
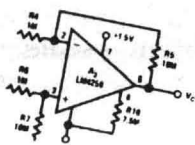
Regardless of whether or not your Senator or Assemblyman is on one of these committees, let him or her know of your support for this legislation. Stay tuned to BSSS for details as the bill goes through the process.

Thanks to Russ Fleming, WB9NYG, for the above information.

FEBRUARY TRIVIA QUIZ ANSWERS

1. Form 610.
2. Single Sideband.
3. Worked All Continents.
4. 40.
5. David Sumner.
6. Notice of Proposed Rulemaking.
7. I = E/R.
8. .66.
9. 5.
10. Wouff Hong

John's



Junk Box

John Frank, WB9TQG
P. O. Box 5113
Madison WI 53705

At a recent swapfest, I found a piece of test equipment I had been looking for: a relative field strength meter. It was broadband, 1-500 MHz, had variable sensitivity, a battery test button which allowed the user to check the internal battery, and a provision for an external antenna. However, I was not prepared for for the \$149.95 price tag. What to do? Gather parts and build my own relative field strength meter.

After buying a chassis box at the swapfest and using a few parts from my junkbox, I had a relative field strength meter with all the features of the factory built meter at a fraction of the cost.

The circuitry is simple. None of the parts are critical. The diode can be almost any germanium diode. I used a 1N60. A 1N34 should work just fine, but don't use a silicon diode.

R1, the sensitivity control, is a 50K pot. If you don't have a 50K pot, try a 100K pot; I tried it and it worked fine.

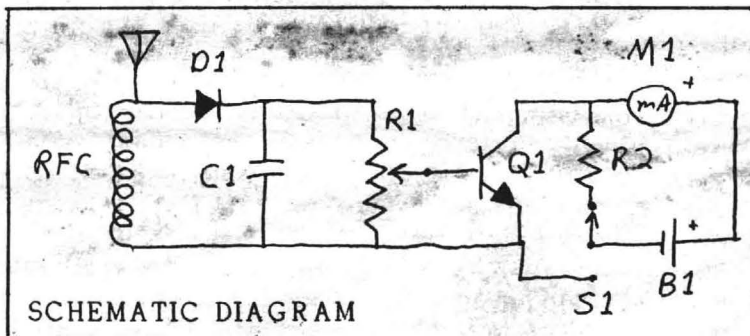
Transistor Q1 is a general purpose NPN silicon transistor. I used a 2N2222 and it worked. If you don't have a 2N2222 in your junkbox, try a HEP726 or an SK3444.

Switch S1 is an SPDT center-off toggle switch. When the battery is switched to the 1500 ohm resistor, the meter reading is an indication of battery strength. The center position turns the circuit off. When the battery is connected to the emitter of the transistor through switch S1, the field strength meter is turned on.

I used an SO-239 as an antenna connector. This allows me to use a telescoping antenna soldered in a PL-259, an old whip antenna from a transistor radio fastened to a banana plug, or a reference antenna at the end of a short piece of coaxial cable. My own preference is for the reference antenna at the end of a short piece of coaxial cable; the reason for that being that sometimes the presence of my hand reaching for the sensitivity control knob on the meter changes the field strength indicated on the meter. By placing the reference antenna in the RF field I am checking, then moving the meter away from the reference antenna, I can check field strength without the presence of my body affecting the field or detuning the antenna.

Do I have any suggestions on how to build it? Yes, use a metal chassis instead of a plastic box.

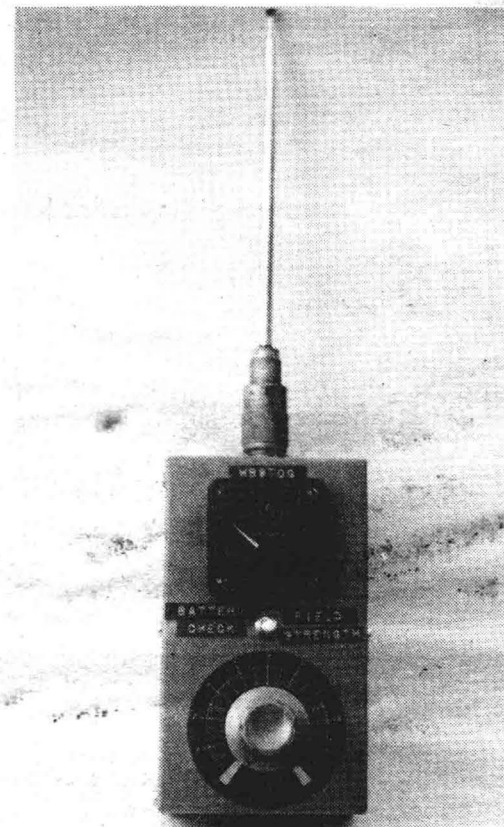
73 & Happy Homebrewing - John, WB9TQG



SCHEMATIC DIAGRAM

PARTS LIST

RFC	2.5 mH RF choke
D1	General purpose germanium diode
C1	.001 uF 50 volt disk ceramic
R1	50K potentiometer
R2	1500 ohms 1/2 watt
Q1	NPN general purpose silicon transistor
M1	0-1 mA meter
B1	1.5 volt AA cell
S1	SPDT - center off toggle switch



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Sid Vaughn, NØDJD, of Mount Vernon, Iowa, is shown here at the Mid-Continent Railway Museum's depot in North Freedom, Wisconsin. This telegraph station was in communication with another across the tracks in the freight station, sending complimentary messages for those in North Freedom for Snow Train '87 (with the warm weather and lack of snow, "Mud Train" might have been more appropriate). The operators were busy explaining to the public how telegraphy works.
K9ZZ photo.



Welcome to our MARA Swapfest special issue! If you are a new reader, we hope you enjoy our humble effort (all volunteer!), and we also hope you'll consider filling out the subscription blank and become a regular reader. If you have been a regular BSSS reader, we hope you will continue to enjoy this paper.

For new readers (and perhaps a few regulars, too), here's what BSSS is all about and how it works:

(1) We produce this paper to try to keep Wisconsin and area Amateurs as informed as we can about what's happening in the hobby. We recognize that not all our readers are ARRL members, and that not all our readers receive all the Ham magazines. We cannot substitute for the full coverage the big magazines can give events in Ham Radio, but we try to cover as much as we can.

(2) Three Hams serve on the BSSS staff: Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901, is our Chairman and general overseer of this effort. He also produces part of BSSS, including Swapfests and Other Events, Club Meetings, The Test Point, The Yellow Thunder Amateur Radio Club's column, The Wisconsin Packeteer, and Items of Interest.

Jim Decker, WB9UQT, P.O. Box 337, Baraboo, WI 53913-0337, is our trusty Treasurer, and he does yeoman service in that capacity.

I serve as Editor, and live (for the moment; an address change is coming soon) at 301 1/2 7th Street, Baraboo WI 53913. I'm responsible for producing the front and back pages, and the columns for the Riverland Amateur Radio Club, the Eau Claire Amateur Radio Club, the Unusual Trivia Quiz, Propagation Predictions, and setting up nearly all other feature articles which are submitted by our very competent volunteer authors. I also produce the ads, including the card ads on the back page. Some ads are submitted camera ready, while some require a bunch of work. In

addition, I take many of the photos in BSSS. It's a lot of cut and paste!

(3) Everyone connected with BSSS does his or her work as volunteers; that includes the three people mentioned above, as well as authors and artists. The only pay any of us receive is an occasional compliment (or brickbat). Badger State Smoke Signals goes to the printer fully pasted up and camera ready; NO professional hands work on this paper until the printer gets the pasteups and prints it.

(4) Badger State Smoke Signals is NOT connected with any club or organization; it is completely independent. I occasionally hear people who believe that if they pay dues to a certain repeater or club they will also receive BSSS. That is not correct, unless we serve as your club's paper (which we would be happy to do). We currently serve the memberships of three clubs and the Wisconsin Amateur Packet Radio Association, along with the Wisconsin Nets Association. For the basic information, see the box on this page.

On another topic: The Westlink Report carried a story about reaction to Novice Enhancement, and it wasn't all good. It seems that some of the 220 MHz FM gang in Illinois nearly gave away their 220 rigs at the Wheaton Swapfest. I wish I'd been there with a few shopping baskets! But, it sounds like "if you won't play the game my way, I'll take my marbles and go home!" They evidently feel that the FCC is being unfair to them by allowing Novices on 220 FM. But, those very Amateurs are also being unfair to the Novices, by denying the Novices the opportunity for contact with seasoned (and supposedly reasoned) Amateurs. If there are no veteran Hams on 220 FM, from whom will the new people learn? If they are left alone with each other, they will develop their habits without guidance, and that is indeed unfair!

The Westlink Report story also stated that some Amateurs (hopefully not very many) feel the new breed of Novices have to be segregated from "mainstream" Amateur Radio (whatever that is). I guess I'd feel better about it all if I could be absolutely certain I was segregated from Amateurs filled with such hostility toward the newcomers who are the future of this hobby.

I'm surprised (but I probably shouldn't be) that such poor attitudes toward beginners exist, but how did the people who

favor such segregation get their start in this hobby?

The average age of Amateurs is rising at an uncomfortable rate. Novice Enhancement should help to reverse that trend. If it doesn't, and if nothing else helps, we are part of a dying hobby. If it dies, it will die of old age, complicated, perhaps, by a secondary infection of terminal selfishness.

BSSS CLUB DEAL

Badger State Smoke Signals would be happy to serve your club's members as your club's newsletter. The cost to your club is as low as \$4.20 per member per year. For full information and requirements, contact Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage WI 53901, or call Ken at (608) 742-3560.

ADVERTISING INFORMATION

With our change to publication by offset printing, we can now accept display ads. The basic information is as follows:

AD SIZES

FULL PAGE: 10.5" wide and 13.0" high

HALF PAGE: 10.5 by 6.5 or 5.25 by 13.0

1/4 PAGE: 10.5 by 3.25 or 5.25 by 6.5

1/8 PAGE: 5.25 by 3.25

BUSINESS CARD: 3.5 by 2.0

AD RATES

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\$60.00 (1 time)	\$54.00 (2X)	\$51.00 (3X)
\$48.00 (4X)	\$45.00 (6X)	\$42.00 (12X)

HALF PAGE

\$36.00 (1 time)	\$32.40 (2X)	\$30.60 (3X)
\$28.80 (4X)	\$27.00 (6X)	\$25.20 (12X)

QUARTER PAGE

\$20.00 (1 time)	\$18.00 (2X)	\$17.00 (3X)
\$16.00 (4X)	\$15.00 (6X)	\$14.00 (12X)

1/8 PAGE

\$12.00 (1 time)	\$10.80 (2X)	\$10.20 (3X)
\$9.60 (4X)	\$9.00 (6X)	\$8.40 (12X)

BUSINESS CARDS

\$5.35 (1 time)	\$4.82 (2X)	\$4.55 (3X)
\$4.28 (4X)	\$4.01 (6X)	\$3.75 (12X)

These rates are based on camera-ready copy. For more information, and for issue closing dates, contact Ken Ebner, K9EN, 822 Wauona Trail, Portage WI 53901, or call Ken at (608) 742-3560.



SUBSCRIPTION BLANK

Regular individual subscription rates

1 year (12 issues): \$7.50
2 years (24 issues): \$14.00 (save \$1.00)
3 years (36 issues): \$20.00 (save \$1.50)

Send check or money order to Jim Decker, WB9UQT, P.O. Box 337, Baraboo WI 53913-0337.

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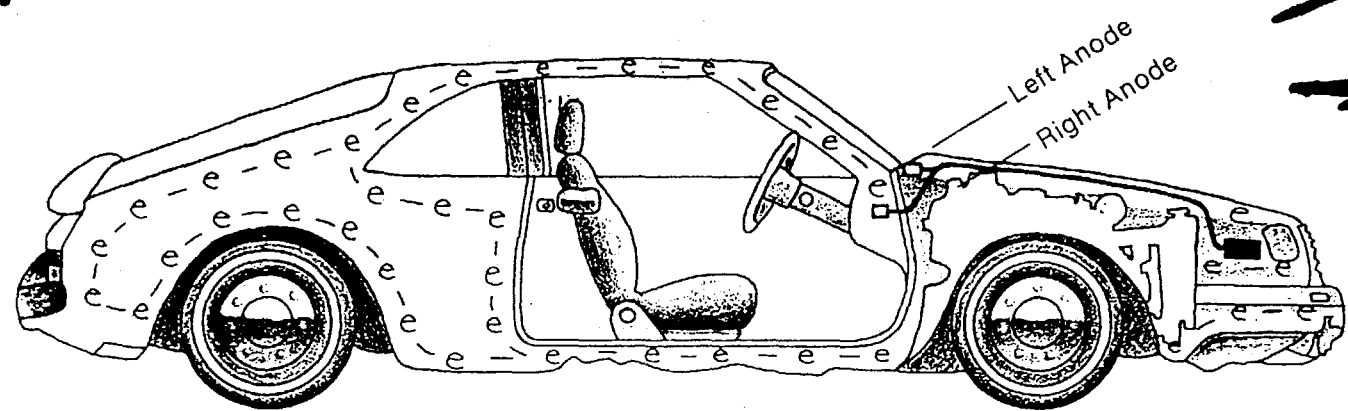
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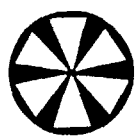
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TELEGRAPHERS DIDIT AT SNOW TRAIN

Shown here are Bob King, KA9GNY, of Baraboo (author of this month's BSSS cover article), and Fred Becker, W9KKM, of Wisconsin Dells. This photo was taken at the Mid-Continent Railroad Museum during Snow Train '87. Both are former telegraphers; Bob worked for Western Union and The Chicago and North Western Railway, and Fred handled telegraph traffic for the Milwaukee Road. Bob was formerly licensed as W9QOQ ("Nine Quarts of Old Quaker"). Fred can be heard on voice modes as "W9 King Kong Monster at Kilbourn, and the name is Fred - F - Fred, R - Red, E - Ed, D - Dead." K9ZZ Photo.



For Your Information!

How do you judge an automotive value? Ask those in the industry and they will tell you that condition and appearance are paramount in the evaluation. If you are purchasing a new car, its value several years down the road is important either if you wish to keep the car or sell the car. So condition and appearance dictate the value of the car at any point beyond the day it was manufactured. A RustEvader and good maintenance will pay off by increasing the projected value of your car by reducing the rate of corrosion and retard rusting. The RustEvader was designed specifically to retard cosmetic corrosion. The normal microscopic pores in the paint are protected first. Small scratches, nicks and scars will not grow into ugly, scabby, cancerous body corrosion. It is hard to imagine that your new car is so vulnerable but just look at any car that is two or three years old and you can see the devastation that has already begun.

It is easy to understand how hidden corners, bends and shapes of sheet metal body parts are consumed by a hostile environment. Abrasions from sand, stone and salt and freezing and thawing of water activate microscopic corrosion sites and pores in the paint that rapidly advance into body panel failure. Even galvanized sections that have been welded or bent in the factory-forming process are open to attack.

In order for rust or corrosion to occur there must be three essential ingredients that interact: oxygen, metal and moisture, (H₂O). The metal provides the electrons to satisfy oxygen's craving for electrons. Moisture is needed to provide the pathway of electron transfer from iron to oxygen. The most common way of preventing automotive corrosion is to apply a barrier between oxygen and the metal. This is why we paint automobiles. The paint is a suitable barrier. When the metal loses paint or is incompletely painted corrosion begins and continues until all of the metal is converted to an oxide or rust. Extra barriers have been developed such as undercoatings, rustproofing and paint sealants; but they are effective only as long as they insulate the metal from oxygen and water. Paint, rustproofing and sealants are known as di-electrics (not permitting electron transfer). As long as these di-electrics are in place without any small breaks, cracks or crevices, nicks, scratches or stone chips, the automotive body has a fair chance of surviving the environment. However, in the real world, a constant attack is underway to break down these barriers. Once broken, the barriers permit the migration of electrons from iron over a moist pathway to oxygen—the result is rust and corrosion. This is a simplified explanation that gets infinitely more complex with the introduction of industrial pollutants naturally occurring substances, sea salt and road salt; however, the complexity is still as simple as the migration of electrons from the metal to some other substance. This migration or coupling of iron and oxygen can be interfered with by the addition of excessive electrons from a source other than the iron or metal. RustEvader provides this source of free electrons that pacify oxygen and interferes with the coupling of iron and oxygen in the rusting process.

Since automobiles are produced essentially totally coated with a di-electric barrier of paint and rustproofing, the need to protect breaks in these barriers is of significant importance. The RustEvader forces the impressed electrons to escape or exit at the very site

where the barrier has broken down or worn away. RustEvader only works where and when it is needed. This is accomplished by pumping excess electrons on to the car body creating a condenser effect (when the di-electric is essentially intact) between the car body and the RustEvader anodes. Electrons repel each other resulting in their desire to return to a more positive home (anodes and atmosphere). In their escape from the automotive body thru breaks or pores in the di-electric coatings, these impressed electrons interfere with the rusting process and retard the rusting at local corrosion sites. There are variables that effect this interfering process: the composition of the metal, the type and concentration of the electrolyte, temperature and humidity.

Generally speaking, increases in humidity and moisture increases the rate and quantity of electron escape. However, even when the relative humidity is very low electrons will freely escape into the atmosphere. The impressed electrons escape in two ways: by displacing other electrons and by direct individual movement. If a continuous electrolyte exists (such as complete submersion in salt water) between the breaks in the coating on the car body and anodes, displacing electrons will move from the negative car body to the positive anode. In this condition the greatest rust retardation effect will exist. RustEvader works best where and when it is needed most. Under mild conditions of low humidity breaks in the coating permit the escape of electrons at corrosion sites and because of the low humidity only small quantities of electrons are needed to interfere with the rusting process. Compromises had to be considered in the RustEvader design. Therefore, complete interference in the rusting process cannot always be expected but rust retardation is dramatically demonstrated.

Unibody construction and modern autobody panel design is extremely vulnerable to corrosion: therefore, they are naturally presented to the consumer for use in a totally coated (painted) form. RustEvader has been designed to assist in the careful maintenance program by retarding corrosion at breaks in the coating. The smaller the break, the more concentrated the RustEvader effect. Large abrasions (circles 6" across) get very little protection at their centers. Most of the protection is provided at the perimeter (interface) of the paint and the abrasion. Therefore components such as exhaust systems and suspension components, which are normally not coated, are not protected. Body panel abrasions are not normally neglected by their owners and are repainted (coated) soon after abraded, therefore, the RustEvader was designed to assist the owner who is conscious of careful maintenance.

You want your car to look good while you're driving it, when you are ready to sell or trade it and particularly if you decide to give the car a major overhaul. If you lease a car, you are responsible to maintain a certain cosmetic standard or pay a penalty.

RustEvader was designed for people who care about their car and understand the value of careful maintenance and effect on their pocketbook. RustEvader wants your car to last and maintain its maximum value. Best of all RustEvader is yours forever. It's protection you can keep and take with you when you sell your car.

Rust Evader

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F A R SCHOLARSHIPS ANNOUNCED

The Foundation for Amateur Radio, Inc., a non-profit organization with headquarters in Washington, D.C., plans to award twenty-six (26) scholarships for the academic year 1987-88 to assist licensed Radio Amateurs.

The Foundation, composed of fifty local area Amateur Radio clubs, fully funds two of these scholarships from the proceeds of its annual Hamfest.

It administers, without cost to the donors, seven (7) scholarships for the Quarter Century Wireless Association, two (2) each for the Dale (FL) Radio Club, the Baltimore (MD) Amateur Radio Club, the Department of State Amateur Radio Club, and the Amateur Radio News Service, and one (1) each for the Radio Club of America, the Richard G. Chichester Memorial, the Young Ladies' Radio League, the Edmund G. Redington Memorial, the Columbia (MD) Amateur Radio Association and the Vienna (VA) Wireless Society.

Also this year there will be three one-time awards in memory of recent Silent Keys.

Licensed Radio Amateurs may compete for these awards if they plan to pursue a full-time course of studies beyond high school and are enrolled or have been accepted for enrollment by an accredited university, college or technical school. Most of the scholarships require the applicant to hold at least an FCC GENERAL Class license or equivalent.

The awards range from \$350 to \$900, with preference in some cases to residents of specified geographical areas or the pursuit of certain study programs.

Additional information and an application form can be requested by letter or QSL card, postmarked prior to May 31, 1987, from:

F A R Scholarships
6903 Rhode Island Avenue
College Park MD 20740

The Foundation for Amateur Radio, incorporated in the District of Columbia, is an exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1954. It is devoted exclusively to promoting the interests of Amateur Radio and those scientific literary and educational pursuits that advance the purposes of the Amateur Radio Service.

Pat Murphy died and Mrs. O'Reilly attended the wake, where she consoled the widow Murphy saying "Tis a shame we had to lose Pat, was he a member of the KCs?" "No," Mrs. Murphy said, "Pat was a home body and didn't go out much." Still inquisitive, Mrs. O'Reilly asked, "Did he belong to the Catholic Order of Foresters?" Again Mrs. Murphy said, "No, Pat wasn't a joiner and he stayed at home and enjoyed his family." "Well, don't tell me he was one of those Ku Kluxers?" Said Mrs. O'Reilly. "Begorra and what's a Ku Kluxer?" said Mrs. Murphy. "You know, one of those devils under the sheets," said Mrs. O'Reilly. "Oh, that he was!" exclaimed Mrs. Murphy.

Eau Claire A.R.C.

NEXT MEETING

The next meeting of the Eau Claire Amateur Radio Club will be Tuesday, April 14, at the Eau Claire Parks and Rec. Building. Lunch committee is John KB9R, Lane KD9OB, Ron KB9BM and Robin NI9R.

MARCH MEETING SUMMARY

The meeting was called to order at 7:35 p.m. The minutes were approved as read. (Apologies to Gene, KA9DWH, who was omitted from the Hamfest committee list.) The Treasurer's report was approved as read.

OLD BUSINESS

Ron, WA9PAM, reported that preparations for the Hamfest are moving along. Flyers are ready and many have already been distributed. Tickets will be ready soon and advanced orders have already been received. Members are encouraged to take flyers for distribution and to encourage participation by commercial concerns. There will be no charges to individuals for tables, in keeping with past practice.

Todd, N9EQP, reported that 6 hams assisted at the Ice Races - Todd N9EQP, Larry N9EZD, Bill KA9GNG, Phil KA9LJK, Andy WB9ULD, and Dave N9FGZ.

The March of Dimes is coming up in late April - more on that at the April meeting.

NEW BUSINESS

Don, K9UXP, initiated a discussion of repeater use by hams who have not paid repeater dues. Possible inequities in the dues structure were considered; any change here would require an amendment to the constitution. Frequent use of the repeater by area hams who are not repeater members was mentioned. Some members felt that a "crack down" would only foster ill will and examples where this has happened in other areas were cited. Relevant passages from the constitution and the repeater information book were referred to, but many felt that the situation was best handled as a problem in communication and human relations. In this spirit, a motion was presented instructing the secretary to draft a notice for insertion in the Badger State Smoke Signals, such notice to urge frequent repeater users to pay repeater dues. The motion passed.

Ruth, NK9L, the new Net Manager of the West Central Wisconsin Traffic Net, reported on the net's status. Problems with liaison with other nets and with submission of paper work resulted in a brief lapse in the net's ARRL affiliation. It is hoped that these problems have all been straightened out and on this assumption the net

has been granted reaffiliation with the ARRL.

Robin, NI9R, summarized a letter from the L'Anse Creuse Amateur Radio Club of Mount Clemens, Michigan, asking the club for a donation to help W8HIU in a tower dispute which might have implications with regard to PRB-1. There being no motion or discussion, interested members were invited to read the letter after the meeting.

Interested members were also invited to pick up flyers announcing scholarships offered to 1987 high school grads (with amateur licenses) by the Dayton Amateur Radio Association. Nomination blanks for Ham of the Year have also been received from the Dayton group and were made available to those interested.

Treasurer Darold, N9FLK, expressed concern that procedures for submitting expenses were not being followed and asked those with bills to submit to have them initialed by two other club officers before submitting them to him. Phil, KA9LJK, reminded us that the treasurer is authorized to pay routine bills - repeater phone bills, for example.

ANNOUNCEMENTS

LJK clarified the re-instatement fee policy for members whose dues were not paid on time. The \$2 assessment does not apply to new members.

Carl, W9NW, announced that volunteer exams will be given in the basement of the Williams Street Congregational Church in Menomonee on March 18. A large number of aspirants is expected, including a Novice class being taught by Tom, KD9TT. This date predates the changes brought about by Novice Enhancement. Carl also announced VEC exams to be given April 18 at the UW - Eau Claire Maintenance Building from 9 a.m. until noon. All walk-ins, fee \$4.35. Bring both your original license and a photocopy. This session comes after Novice Enhancement goes into effect and the team will be ready with elements 3-A and 3-B and the new 610 form.

FLK announced that the new rosters will be in the mail by the end of next week. Also, call books will be ordered soon. The new roster has been sent to BSSS and this should solve the problem of some members not getting theirs. If you are not getting your Smoke Signals, let NI9R know and she will tell BSSS.

The Northern Wisconsin Radio Club meeting is scheduled for April 24. The Rochester Hamfest is April 4. The Dayton Hamvention is April 24, 25, 26.

LJK reminded members that Dave Preuher will present a program on severe weather at the April meeting.

The meeting was adjourned at 8:20 p.m.

Respectfully submitted:

Robin, NI9R -- Sec. EARC

EAU CLAIRE ARC
REHAB RADIO PROJECT

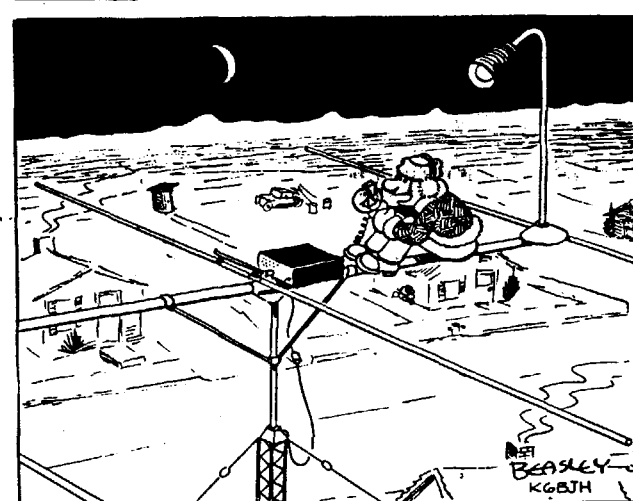
The rehab radio project at Sacred Heart Hospital in Eau Claire has changed its operating time and procedures in recent weeks. We are now operating afternoons to avoid the QRM and changing band conditions which plagued us during our even-

ing sessions. The afternoon sessions are also preferred by patients who have more energy earlier in the day. One of the greatest advantages of the afternoon sessions is that we can QNI the PICO net at 3925 and then QSY with some of those folks for a friendly chat. We continue to use 2 meters, especially with patients who find SSB difficult to understand. Look for us at 3:30 on Wednesdays around 3925 - or, better still, QNI PICO (one for the count!) and ask where we are. -Robin NI9R

EAU CLAIRE AREA REPEATER USERS

The K9UXP and KA9ELD repeaters are owned and operated by the Eau Claire Amateur Radio Club. They are, at present, open repeaters and may be used by any ham whose license privileges permit such use. Infrequent users and hams travelling through the area are not expected to contribute to the cost of maintaining these machines, nor are those who use them in emergency situations only. The Club is asking all users of these repeaters to consider if they are acting responsibly and carrying their share of the load. "Infrequent" users might be surprised if they logged their repeater use for a week or two! Those wishing to pay repeater dues (\$10) should contact Darold, N9FLK.

73 --- Robin NI9R, Secretary EARC



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A Thumbnail Sketch of MARA - or "A Repeater is a Repeater"

In the late 1960s, a number of Madison Hams were becoming interested in this "new" mode, 2 meter FM, spurred on by the availability of cheap rigs. These were old tube-type taxi and police mobile transceivers made by Motorola, GE, and others, that had been taken out of commercial service due to obsolescence. A little "padding" and "tweaking" and a new set of "rocks" would put you on 2 meter FM on one frequency for \$25 - \$50, not counting power (12 volt car battery or car) and antenna. We had a ball with informal nets and meetings for lunch and 807s.

Suddenly, out of California and Chicago came news of a new Amateur development, 2 meter FM repeaters. These were patterned after successful commercial repeater systems. Many of us young, eager Hams decided that we wanted to get in on this. So, the Madison Area Repeater Association, Inc. (MARA) was incorporated in Wisconsin in 1971 to support a 2 meter repeater in Madison.

Our first repeater was a crude lash-up, located at the Kappa Eta Kappa Electrical Engineering Fraternity on the UW campus. It was assembled by Bill, WA9PWR, and others at KHK, and Paul, WA9PWP. It used no duplexer, just two separate antennas and old tube-type gear housed in a wooden milk crate. We originally identified as WA9PBW, the KHK club station call sign.

We had quite a brain trust in our small club at that time. Membership numbered about twenty. The first and continuing president, Clyde "Coffee", W9HSY, is a well-known major-market radio personality. The first vice-president, Gary Chatters, WA9ZZZ, Secretary Paul Goemans, WA9PWP, Treasurer Tom Doyle, WA9FTH (now W9KE), and technical committee member Bill Dumke, WA9PWR (now WB5TCO), were all Electrical Engineering graduates or post-grads at the UW. Our first newsletter editor, Stan Burns, K9KGA, was a Teaching Assistant in Electrical Engineering, and our first "legal counsel", Jim Weitzman, K9YTJ, was in Law School at the UW. We used the frequency pair 146.34 MHz/146.76 MHz. There were no standard offsets or frequency coordinators in 1971!

As we gained experience, equipment donations and funds, our system improved and moved from KHK to the roof of the Engineering Research Building on campus. We added an autopatch, which we have maintained ever since. We experimented with "split-site" with Lloyd Berg, WB9CRG. Finally, we persuaded Walt Harju, W9HSL, Chief Engineer of WISC-TV to let us install a repeater on WISC's tower. Now we covered Dane County!

We used our club's own call, WB9AER, which became WR9ABT when the FCC began to license repeaters. Membership grew to over 100. Our quarterly meetings moved from the old Howard Johnson's on the bellline near Park Street to the Red Cross Building on Ann Street. We wrestled with repeater QRM, access, and autopatch

problems, as 2 meters filled up with repeaters and repeater operators. Oh yes, we had switched to the now standard repeater pair 146.16/146.76!

In 1977, MARA was asked to vacate the WISC-TV site. After a frustrating and sometimes panicky search, we signed a renewable contract with the management of WMTV-TV to locate on their tower. The repeater was revamped and a second repeater system for 147.75/15 was added, with new control systems again designed and built by Tom, W9KE. With our main antenna up 850 feet on WMTV's tower, we enjoyed great regional coverage, and attracted new members until the roster swelled over 150 towards 200.

Our annual Hamfests began with several tables outdoors in Hoyt Park in the summer of 1972. We soon moved to the fine indoor facilities at the Dane County Expo Center. Our annual Swapfest has gained a reputation as one of the best in this part of the Midwest, and each year our balance sheet showed an increasing profit from the Swapfest. Unfortunately, our increasing tower rent at WMTV was eating up most of the club's income. It became increasingly clear that MARA would have to locate a new repeater site or be priced off the air. Everyone began to search for a new location for the repeaters.

In 1983, WISM radio, where Clyde, W9HSY, was employed, built a new FM tower near Oregon, Wisconsin. Would this be our salvation? It was not to be. Through the efforts of Clyde, W9HSY, a repeater system was installed there, but results were disappointing and we unhappily remained at WMTV.

In 1986, MARA was on the move. Through the efforts of Ralph, K9VDD, MARA secured a location atop the Tenny Building on the square, Madison's tallest building except for the State Capitol. Then Bob, WD9HEX, secured approval for our second site atop the UW Clinical Science Center, just west of the UW campus.

With our two new repeater sites and with our fixed expenses reduced dramatically, we could now upgrade our aging equipment. New commercially built repeaters and control systems are being ordered. Soon our signal quality, reliability and range will improve. MARA should remain the big friendly signal on 146.76, welcoming all local and transient Hams. The 147.15 system will continue to serve the Madison Area as well, for informal or public service traffic.

See you on 76!

DE Paul, WA9PWP



The 1987 MARA officers are, left to right, Clyde Downing, W9HSY, President; Gary Muskat, N9DRA, Secretary; Tom Doyle, W9KE, Treasurer; and Paul Anderson, WB9QVV, Vice President and Technical Director. MARA's mailing address is P.O. Box 3403, Madison WI 53704. K9ZZ Photo.

ODDS 'N' ENDS: Your Editor won the grand prize at that first MARA Swapfest in 1972.... We thank Don Evenson, K9JYX, Baraboo, for his help with this issue of BSSS.... If you are reading BSSS for the first time, we hope you'll consider subscribing; a blank is on page 8.... Please support our BSSS advertisers! K9ZZ

A New Mode of Communication



(Editor's Note: We are pleased and privileged to have received the following communication from Vrah Remah, J8XGN+1. Vrah's fertile and innovative mind is as sharp as ever, as you will read. K9ZZ.)

Dear Jim:

Here in the laboratory, we are working on a new mode of operating in the crowded ham bands.

We are calling it DMSSB, which stands for Double-Multiplexed Single Sideband Transmission. It works like this: If, during a QSO, QRM builds up on one side of you, the mode automatically switches to the opposite sideband. With VOX operation, the QRM is easily detected by our receiver, and changes sidebands on the xmitter. It also sends out a digital signal to automatically key the receiver adapter at the receiving end.

The FCC will most likely assign this mode as A-00.

The picture of the experimental transceiver (above) shows some of the innovative circuitry involved.

On the breadboard layout are some of the major components. Other circuits not shown will be briefly described.

For transmission, note the special double-button microphone, each generating a separate sideband signal, which is fed to a diplexed amplifier controlled by a special gating circuit. Here we had a problem: If

we used either an AND or a NAND gate, neither the OR nor the NOR gate would latch properly, and there is nothing worse than an unlatched gate, so we developed a SOLO and an ALSO gate that does the job perfectly.

The signal(s) are now fed to two high "Q" traps, shown being adjusted by E.T.'s son. These signals are then fed to a special mixer (courtesy of G.E. Labs) and on to a special tuner (courtesy of Sony) which has a funnel diode input. This prevents overloading the drain of the input F.E.T. A special bias circuit was needed, so E.T. came up with a special grid leak, complete with drip pan, which controlled the drive to the output tubes in the background.

These are operated in pull-pull to cancel out uneven harmonics and provide a clean signal which is fed to a special butterfly antenna (pat. pending) which is adjusted by a special control box at left. This adjusts phasing, angle of radiation, and cancels out all "J" factors.

Also in the background is a special speaker with dual voice coils, one for each sideband. This eliminated a lot of switching circuitry.

For clarity, a block diagram is shown on the opposite page.

Will advise you when patents are pending and production is possible.

VY 73

Vrah Remah J8XGN+1

Guest Editorial

By Carol Kernats, N9FVV
From The Feedline
Four Lakes ARC

Can you remember back when you could barely copy your own name at 5 WPM? When you didn't know Ohm's Law from your left foot? When you thought that propagation was something animals did?

For some of us, those days are not so long ago, while for others they are ancient history. Yet, we have all spent some time as greenhorns, and you know how many questions crop up at that stage.

No two Novices are alike, clearly, and their needs are different as well. Some lucky people grew up playing with soldering irons instead of yo-yos, but they might struggle with Morse code. Other individuals appear to have an innate sense of rhythm, but their eyes glaze over when contemplating the schematic of a crystal-controlled oscillator.

As we all know, of course, these problems are not insurmountable. The solution lies in finding some sympathetic soul to act as a guide for the first few months. This might mean lending out a rig that's dusty but still works, or explaining SWR, or helping the brand-new Ham get through that first paralyzing QSO.

There's a name for these very special mentors. They're called "Elmers." Getting a Novice license is only a start, and, at this point, a good Elmer can mean the difference between dropping out due to frustration, and getting on the air and becoming "hooked" for life. Special Service Clubs, such as FLARC, take up the slack here, as members put on their "Elmer hats."

FLARC stands to benefit, too, as these new Hams join and become active in the club. These incoming members spread their enthusiasm to their family and friends. With any luck, we might need to hold more than one Novice class per year. Being an Elmer, then, is a relatively small investment for a potentially large return.

There are other kinds of "returns", also. At a recent VE exam here in Madison, for instance, one Novice upgraded to General. When his Elmer, who was present, congratulated him, it was impossible to say whose smile was wider!

Why not share your expertise with someone who is just starting out? Are you a homebrewer, a DX-er, CW op, a contester, an antenna buff, or a ragchewer? Then somebody needs you.

Not long ago, one FLARC member stated the case very simply. He had dropped by to help a rookie understand the intricacies of a newly acquired rig. The rookie thanked him and said, "Hey, I owe you one." But the old-timer grinned, shook his head, and responded, "No, you don't. Just pass it on!"

(Editor's Note: Carol's homebrew one tube regenerative receiver, pictured in last month's BSSS, is now working just fine; soon it'll be tweaked to the Ham bands!)

GOVERNOR'S CONFERENCE ON
EMERGENCY MANAGEMENT
TO BE HELD IN APRIL

- Russ Fleming, WB9NYG/WC9AAG -

The 21st annual Governor's Conference on Emergency Management is scheduled for April 23 and 24, 1987, at the Concourse Hotel in Madison, Wisconsin. Emergency Managers from all levels of government and representing a wide variety of disciplines will be there.

The state Radio Amateur Civil Emergency Service (RACES) station WC9AAG will be operated on:

- (1) 3985 KHz lower sideband.
- (2) 2 meters.
- (3) Packet Radio.

The station will be in operation from approximately 8:00 a.m. to 4:00 p.m. on Thursday, April 23, 1987.

This will be the tenth year that Amateur volunteers operate the station to demonstrate to emergency personnel the expertise and facilities available to them, not only in their own jurisdiction, but

statewide as well.

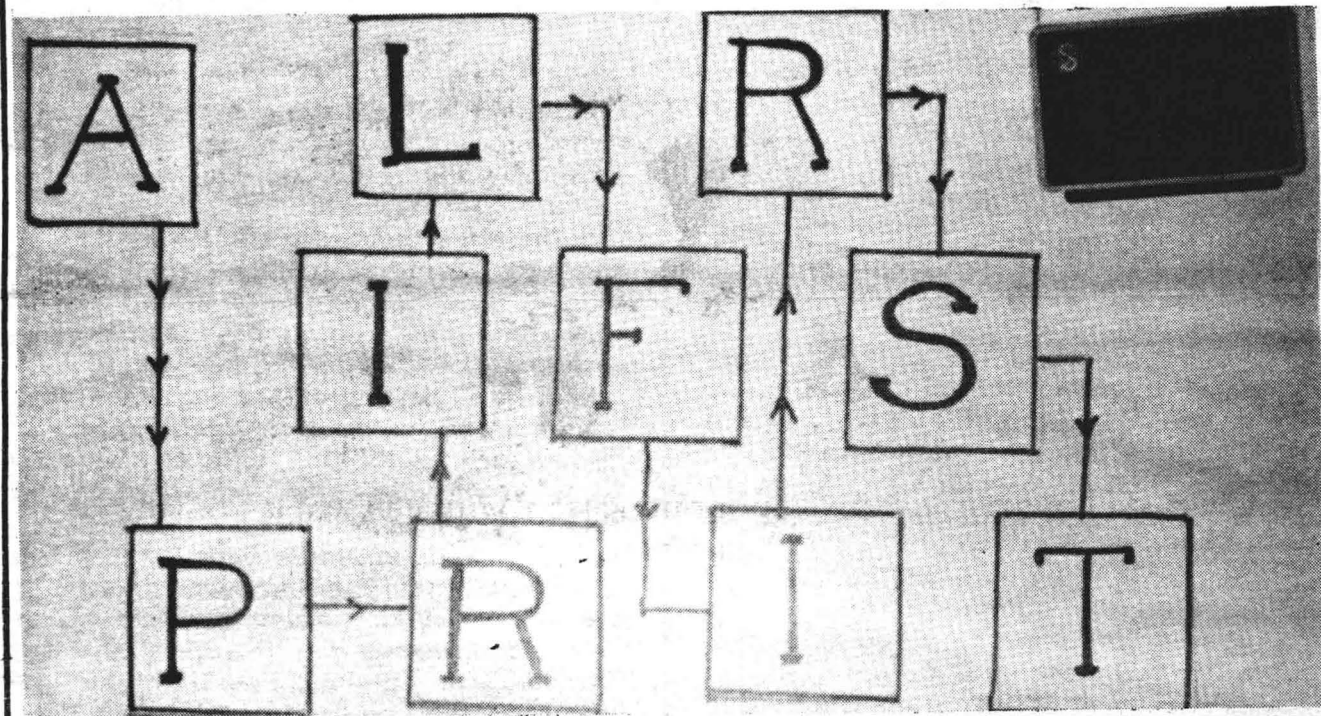
In previous years, the Governor has taken the time to make several QSOs and signed QSL cards to those Amateurs he had contact with. We will again attempt to have Governor Thompson take time from his busy schedule to thank those monitoring stations for their participation in this demonstration.

Large state maps are used with red signal dots to indicate the contact as a visual aid for the attendees. We hope to make contact in all 72 counties this year.

Please mark your calendar for April 23rd and attempt to check in to the net. A relay thru 2 meters to 75 meters is also possible for those stations who cannot work direct.

IMPENDING DISASTER DEPARTMENT: The day before Thanksgiving, a newspaper's food editor received a frantic call from a young-sounding woman asking how long to roast a 22 lb. turkey. "Just a minute," said the editor, and turned to consult the chart on her bulletin board. "Oh, thank you so much!" said the caller - and hung up.

VRAH REMAH, J8XGN+1, OPENS THE DOOR TO A NEW COMM. MODE. SEE PAGE 13!



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- From The Westlink Report -
WM4T WINS ANTENNA/TOWER CASE

The Lakeside Park, Kentucky, tower case is over, and John Thernes, WM4T, is the winner (See BSSS, March 1987, Page 8).

Westlink Report spoke with John only a few hours after the city had signed a consent decree that gives him the right to finally put up an antenna, and much more. "I would like to inform the amateur radio community that today, February 25, 1987, a federal district judge signed off on a consent decree to settle the WM4T legal battle with the city of Lakeside Park.

"As the ham community knows, I had originally asked for a 70 foot tower with an 8 foot mast to support a tri-band antenna at 70 feet and a 2 element 40 meter beam at 78 feet. In settling the dispute, I was given most of what I had asked for. Based upon the discussion held before the settlement conference on February 12, held in front of a federal district judge, the city agreed to the following terms:

1) A tower of 65 feet will be permitted.

2) The 8 foot mast to support the beams will be allowed for a total tower height of 73 feet.

3) All necessary building permits will be issued and will remain free from any present or future ordinances which the city may enact.

4) A cash payment of \$13,800 will be made to John Thernes by the City of Lakeside Park. The cash payment represents virtually all attorney fees from the effective date of PRB-1 on, which was in September, 1985."

John noted that while this cash settlement was a big help in defraying the cost of his legal battle, it did fall short by almost \$7,000 of the actual money spent in litigating the case. However, he said that he hoped that the rest of the nation's amateurs would view what happened as a major victory for all hams, "...now that community zoning boards will be forced to think twice before denying an amateur a permit for an effective antenna system which will provide for national and international communication."

WM4T told us that now that he has personally won the right to erect his antenna system, he wants to help others as well. The Northern Kentucky Tower Fund formed to support him will continue to exist and will still accept donations. He is willing to speak at major conventions if invited and says that he will have a booth set up at the 1987 Dayton Hamvention where hams can come by "to get further details."

Anyone wishing to obtain a copy of the consent decree should send a business size SASE to the Northern Kentucky Tower Fund, P.O. Box 17721, Lakeside Park, KY 41017.

NEW FORMAT COMMENT:

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73, Roy Neal, K6DUE

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3. CUSTOM CARDS You are not restricted to examining five sample cards on which you change the name, address and call sign. We encourage you to examine our catalog which illustrates hundreds of cuts (pictures) suitable for backgrounds or decorations on QSL cards. Use them at no extra cost! We purchased the complete line of exciting background cuts from the collection of the late Warren Rogers, KØAAB, and these cuts are now again made available for your use.

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4. AMATEUR RADIO PRINTERS Two of our qualified pressmen are Amateur Radio operators (WØMGI and WDØFRV) and we talk your language. We know what you want when you request the QCWA or ARRL logo. We know what G.M.T., DXCC, 10-X or a slashed zero is. Many of our fonts of type contain the slashed zero and you do not get a "patched up" printing job if your call sign is from the 10th district.

5. PROMPT DELIVERY Any order received is in the mail or out via U.P.S. 10 days (or most times sooner) after arrival in our shop. When you order cards the first time after receiving a new license, you want to mail out QSLs pronto, not wait for a month to get delivery from the printer.

6. OTHER SPECIAL TYPES Front side report styles, husband/wife combination QSLs, Club QSL overprints, ham radio letterheads and envelopes, membership cards and repeater dues receipts are all printed in our shop. Make special mention of your interest in these items as they are not included in our regular sample packet.

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IT'S WEATHER TIME

John Offerdahl, KC9XH
110 Lincoln
Verona WI 53593

(Editor's note: While this article is directed to Amateurs in the south-central Wisconsin area, the weather incidents indicated as reportable apply to other Skywarn or weather nets as well.)

With Spring on the doorstep and Summer close on her heels, our thoughts must unfortunately turn to the impending season of severe weather. As primary net control for the South Central Wisconsin Skywarn Net, I would like to take this opportunity to make a few comments upon the operation of this year's net.

As in the past, the Net will activate over the 146.280/880 repeater which occupies tower space graciously provided by WILV Radio atop the Baraboo bluffs, covering an area of approximately 31,400 square miles. All hams, regardless of club affiliation, are urged to check into the Net during severe weather and report local conditions to the Net Control Station according to the criteria listed below.

Net Control will then pass your information to the National Weather Service Office, located at the Dane County Regional Airport in Madison via a ham radio operator who will continually monitor the Net frequency from the Weather Bureau during periods of severe weather. This year, Jim, WD9FRF, will man the station at the Weather Bureau, with myself (KC9XH) acting as Net Control. In addition, Tony, K9JWU; Paul, KA9OBP; Jim, N9AGH; and Joel, N9CPW, will provide backup assistance when WD9FRF and/or myself are unavailable.

Operation of the Net has been modified to accommodate two status levels during net activation. The Net will be activated under FULL ALERT STATUS whenever a severe thunderstorm or tornado warning is issued for any county(s) in south central Wisconsin, or at other times when it is advisable due to potentially severe weather active in south central Wisconsin.

In addition, the Net will be activated under or downgraded to STAND BY ALERT STATUS whenever severe weather is either imminent or approaching, but not currently active in, south central Wisconsin. During full alert status, all traffic must be passed through the Net Control Station, with severe weather and other emergency traffic the only traffic allowed. When the Net is active under stand by status, routine informal traffic will be allowed; however, stations should pause frequently to allow Net Control to inform the Net of late breaking weather developments.

The criteria for determining what is reportable severe weather remains the same as in past years. Primary emphasis is given to reports of wind in excess of 50 m.p.h., hail 0.75" in diameter or larger, obvious funnels aloft and/or tornado touchdowns, and

other severe activity. Other weather information falling outside these criteria may be passed to Net Control for general information, but other information will be strongly discouraged when "things get busy." Primary emphasis is given to reports of wind in excess of 50 m.p.h., hail 0.75" in diameter or larger, obvious funnels aloft and/or tornado touchdowns, and other severe activity. Other weather information falling outside these criteria may be passed to Net Control for general information, but other information will be strongly discouraged when "things get busy."

by thanking Rob, WA9ZTY, for the years of dedication and hard work he put into developing a viable severe weather network in south central Wisconsin. After inheriting the Net in 1986, a few changes were instituted which I felt would improve its basic structure was left unchanged. Through continued participation in public assistance activities such as the South Central Wisconsin Skywarn Net, we will be able to provide an excellent service to the communities, and each other.

L plans to fight the proposal to reassign Mobile Service "...with every means at our disposal on the Notice of Proposed Rule Making, Washington, DC 20554, by April 6, and your comments; if we are to maintain our status, all comments are important. Send your comments to the FCC, Washington, DC 20554, and write "General Docket 87-14" on p. 1.



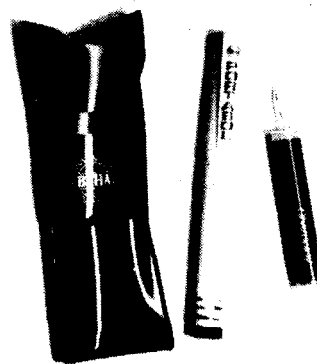
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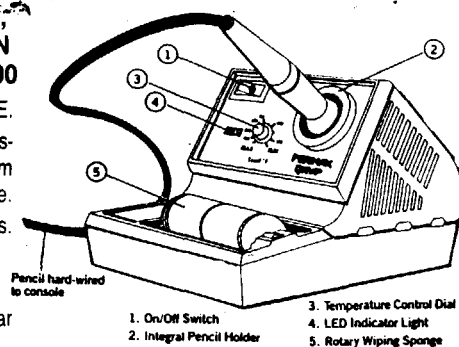
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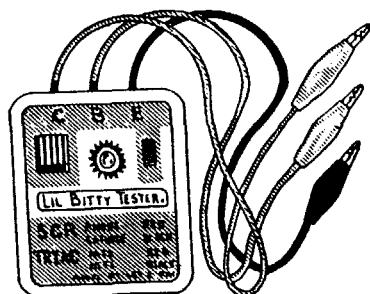
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formation falling outside of control for general information. Other information concerning Spotter's Guide, available through catalog number 018-00006-7.

I would like to close of dedication and hard work weather network in south Net in 1986, a few changes crease its efficiency, but Through continued participation as the South Central Wisconsin continue taking pride in National Weather Service,

THE 220 GRAB: The ARF 220-222 MHz to the Lan our command.." Comments 87-14, are due at FCC, BSSS urges you to submit our full 220-225 MHz allocation original & 5 or 11 copies;

The Wisconsin Packeteer

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Cedarburg, Wisconsin 53012-0436

WAPR MEETING -- APPLETON

The next WAPR meeting will be held on Saturday, March 21 in Appleton. The meeting will be at the Holiday Inn (right off hwy 41) and will begin with a buffet lunch at 12:30 (\$5.95 per head -- soup, salad and build-your-own sandwiches). The meeting will start sometime around 1:30, after everyone has finished chowing down.

The main topic of the meeting will be a bandplan for packet in Wisconsin. The board has a proposed plan which will be presented for your comments and consideration. We will also discuss the design of a state-wide network to link the various LANs together.

WAPR plans to hold at least one of its meetings per year in northeastern Wisconsin. This is a good chance to get together with others who are interested in this mode of communication, and to have a say in how packet radio grows in Wisconsin.

RIVERLAND PACKET CONFERENCE

This is an announcement from your Riverland packet conference planning committee (NOBUI, W9HWQ, WDOELS, W9LZQ) that the Second Riverland Area Packet Conference has been scheduled for April 4, 1987 (Saturday) in Trempealeau, Wisconsin.

What we need from you now is a list of agenda items that you would like included in the conference. If you have suggestions etc., please leave a message for W9LZQ in the BBS. We are looking for all good ideas and also if there are areas of packet radio you would like more information on, let that be known also.

We are inviting amateurs from all areas of MINNESOTA, IOWA and Wisconsin to attend. No door prizes, just good rap sessions! Last conference was an instant success! Lets make this another one...

HAM PHONE BBS IN MADISON

For those of you who have phone modems to complement your tncs, you might want to check out the ham section of the "Tandy" BBS here in Madison. The phone number is 608-274-6922 24 hrs 300/1200/2400 Baud. The collection of ham files

is starting to "take off" and you will find it causes much less, ah, congestion here on 145.01 to download big files like "9LANDMAP" over the phone. If you would like to give it a shot, log on to the BBS and ask the sysop "Fran" for clearance to the ham section. Fran is not a ham, but is a good friend of mine, and encourages hams to call.

See you there! 73 Bryan N9GBJ



4th B.C. of Packet Radio

in WISCONSIN
PROPOSED 2 METER USAGE PLAN
WAPR BOARD OF DIRECTORS

145.010 MHz.

Mail forwarding backbone and long haul comm. Intended for mail fwding and long distance real time communications.

145.030 MHz.

Keyboard communications and experimentation. (BBS free frequency) This frequency will be designated real time communications. No BBSs should be operated on this frequency.

145.050 MHz.

LAN frequency local area network frequency for Appleton/Green Bay and vicinity. Local BBSs should be located on this frequency for the users of the LAN.

145.070 MHz.

LAN frequency local area network frequency for Madison and vicinity. Local BBSs should be located on this frequency for the users of the LAN.

145.090 MHz.

LAN frequency (Already activated) local area network frequency for Milwaukee and Metro area of SE Wisconsin. Local BBSs should be on this frequency for the users of the LAN. (This group is already implemented and has been operating for the past 9 months with excellent results)

145.610 MHz.

Computer to computer operations for high rate of file to file machine xfers. i.e. machine language transfer of files.

This is the total recommended allocation at this time, other frequencies are available but will not be assigned until they are necessary. this will allow us room to grow as new technologies and levels are put into operation.

PACKET OPERATORS:

As much as we all enjoy packet radio, we surely cannot spend 24 hrs each day on packet radio.

What do you do with your packet station when you are not actually monitoring a frequency or working packet?

Surely, all of you appreciate the availability of the many digipeaters. Who among you would be willing to dedicate their packet station to digipeat use during the times when you are not actually working packet radio?

I propose that each and every one of us dedicate our packet stations to some sort of digipeating use during the times we are not actually working packet. What I mean here, is that you leave your

digipeating station on the air when you are not in the shack and leave it on a frequency other than 145.01 such as 144.95, 145.03, 145.05 or ???

The main point here is that when you are not actually in the shack leave your packet station up and running (a computer is not necessary during this time) - (except the PK-64. -ed.-) - so that others have the benefit of your expertise and generosity. the use of your beacon advertising your presence at intervals of no less than 30 minutes is appropriate when your station is digipeating.

The main thrust of this note to all of you is to encourage the establishment of digipeaters on frequencies other than 145.01 to further encourage the placement of some of our PBBS's operated for specific purposes such as handling large files or pix or what have on those frequencies other than 145.01 which is too congested now.

It should be understood that upon your return to your shack, it will be permissible to change frequency to 145.01 for general packet use, thereby disabling the digipeater temporarily on the frequency you have chosen to leave your digipeater on.

If you are willing to dedicate your packet station to digipeater use on frequencies other than 145.01, leave a message to one of the WAPR officers on either WA9KEC, WD9DHI or AG9V PBBS's indicating your call, location and preference for frequency assignment and any other comments on the subject.

This subject is not endorsed at this time by WAPR, but the information gathered will be used as a topic of discussion by the WAPR board.

Thanks de JON - WD9GWZ Waukesha

VIEWS FROM A HILLTOP

This column will address low-tech concerns and the people issues of packet radio. Other hi-tech types can handle hardware and software developments. This month we will take a look at the horizontal/vertical antenna controversy.

About a decade ago, an old timer gave a presentation at the West Allis Radio Amateur Club. It was the story of his work on the development of radar in WW II England. These radar systems used parts of our present VHF/UHF spectrum. He told of the development of extremely high gain antennas. One of the items considered was the polarity question. Now, if my memory serves me correctly (which is more than a rhetorical question), horizontal polarization proved to be more effective. However, it seems to me all of the pictures of airborne radar systems showed vertical antennas. Is there anyone who can confirm (or repudiate) these recollections?

My personal feelings are, below 10 MHz, vertical antennas (with adequate ground systems) generally give better results, while above 10 MHz, horizontal antennas (at a suitable height) tend to do well. It seems to have something to do with effective ground conductivity at different frequencies. These are very broad and general

statements, I'm sure there are specific cases that are exceptions.

If you have any comments, additions, questions, or thoughts on subjects for future columns, send them to TOM II (pronounced Tom Two) c/o WAPR at the address in the masthead, or post them on WA9KEC PBBS.

73 de TOM II

NEW BERLIN PBBS ON 145.050 MHZ

I have a PBBS on the air. The frequency is 145.050 MHz. The board has been running since early December and there have been many changes since then. I have tried to keep up to date W1AW bulletins listed. I have many text files, basic programs and files for binary file transfer available, along with alot of other goodies. So why not drop in on 145.050 and give it a try.

P.S. Please tell your friends about this newer board.

Robert.. WD9ANY

"MSN" .01 DIGI QSY

Effective March 15, the .01 "MSN" digipeater will cease 24 hour operation. N9IF should function as an alternative Madison area digipeater for most paths.

Some time between March 15 and May 1, "MSN" will QSY to the ten meter Novice band. The expected coverage should vary from 100 to 300 miles depending on antenna direction and configuration. 1200 Baud/1000 HZ shift will be used initially unless a different ten meter "standard" is established.

NTS HISTORIC EVENT

So far as is known, the first region to region NTS HF packet link occurred, March 2, 1987, between 1530Z-1630Z on 7095KHz. Participating were W1QYY, W1CE, KB1AF, KW1U, WA1TBY, and KQ3T. Seventeen formal NTS messages were sent from the 1RN stations to KQ3T for distribution to 3RN and 4RN destinations.

In addition, the stations involved re-sent message files using different parameters to explore the functional differences of the various packet parameters.

All messages received were re-filed (manually, for now) within 3 Hrs of receipt, toward the ultimate destination on VHF packet. Participation by anyone interested in HF NTS traffic handling is encouraged; This group meets Mondays, 1530Z on 7095+; AX25V2L2 would be preferred.

73 de Dave - KQ3T

SnigPackLet -- Diskcounted: The feeling one has after going through 100 unlabeled disks searching for a file. --Intercom

WAPR LOGO

A new masthead will adorn the 'WISCONSIN PACKETEER' next month that will incorporate the new WAPR logo that was adopted at the last WAPR meeting. The logo will adorn all of WAPR's official correspondence and forms and with the support of the membership, it will become a common sight throughout the Midwest.

ed note: We received a copy of the results of a recent poll of packet radio users conducted by NK9K. Due to space constraints (it would take over 2 pages of BSSS), we are unable to print it here. It is available on many BBS and we can supply a copy to anyone interested for a sase.

THE CHARGE OF THE LIGHTNING SENDER

Up from his chair the other day,
A Plug arose in some dismay,
To answer a call from a distant town,
On a wire difficult to hold down.

The office was warm, the hour was late
As that sender started at a rapid rate,
And soon he was going like the wind
With the Plug about fifteen words behind.

And faster and faster the dashes rolled,
And the dots like a torrent uncontrolled,
Till through that office seemed to pour
Some sixty words a minute or more;

And there in the dim and waning light--
Driving his pen with all his might--
With lips compressed, to his desk inclined,
Sat the Plug, twenty words behind.

Then swift from his pen the hot words flowed
Like chicken tracks in a muddy road;
And as he thought of his terrible need,
He scratched away at his utmost speed;

And soon on his face came a pleasant smile,
For he had caught on to that sender's style;
And as dots and dashes came to his mind,
He soon was not more than ten words behind.

Onward, still onward, at steady pace,
The Plug surely was winning the race,
And when a long special neared its end,
He knew full well that the sender could send.

Some times ahead, sometimes in the rear,
At last every word to him came clear,
And when they got through, bear this in mind,
The SENDER was fifteen words behind.....

Clarence E. Filley, W7KE
1109 South 2nd St.
Hamilton, MT 59840

The above from 1935 "R9" Magazine. Incidentally, "Plug" is a name for a landline telegrapher.

Copied from KERCHUNK (SOOLAND AMATEUR RADIO ASSN)

Tom, N9---, Recalls that on one of his birthdays his folks gave him two batteries with a note attached... "Toys not included."

A FEW FILLERS SCROUNGED FROM EXCHANGE PAPERS

LATEST LYR-DX BULLETIN

By Dick Kayser, WBBVZX
via ARNS Bulletin

ABES ISLAND - March 20- April 13. ID10T and a group of ISØs will be there primarily for the WPX. They will be working CW and SSB, split on all bands. QSL via ISLOW

POLAND - Sspecial WPX prefix will be used by Les Wolinska operating the special event station SPØOK commemorating "Solidaritie's" 8th anniversary on April 8th around 14,225 KHz., for 24 straight hours beginning at 0001Z. QSL via the Swedish manager SL1M.

FRENCH JUAN DO NOVA - FØOL/YUØU will be operating portable from May 1 - May 13. If you hear two French speaking stations around 29,140 - 29,150 KHz. at about 1100 UTC, wait until they are done and call Eric FØOL portable on YØU, and he will come back to you in English. QSL direct to FØOL with two IRCs and a large SASE.

SABA ISLAND in the Netherlands Antilles chain will be activated by PHØNY May 25 for one week. Look for Hanz daily from 1700 to 1900 UTC around 14,250 KHz. QSL via his manager J3RK.

GABON REPUBLIC - TR1CK will be whittling down the pile ups by call area on 14,280 KHz. from 0330 to 0600 UTC from June 2 to June 5. QSL to his Cuban manager CØKE in Havanna.

MANERIC ISLAND - off the Phillipines will be activated for the first time on July 7th on all bands running spilt operation for two weeks. A special Phillipine callsign - D1ET/7UP will be used for this event. The DXpedition will be submitting notarized paper work to the ARRL DXCC Committee for DXCC approval. DON'T MISS THIS ONE IN CASE IT IS APPROVED!!

A YELL FROM AN XYL (From Mike and Key - via ARNS)

She had just received her General, so she got right on the air.

CQ'd and made a contact without a bit of care.

The QSO was a good one, with signals loud and clear.

Not a sign of QRM or QRN to interfere.

Now you'd think that she'd have been delighted, with a contact such as this.

The report that she was given would have filled other Hams with bliss.

But she stumped out of the hamshack, and announced that she was through.

"The man said I was forty, and I'm only thirty-two!"

Roy, K9FHI, says "A bird in the hand is safer than one overhead." --CWRA (Baraboo) Newsletter.

ed note: We recently received an excellent story about one of Wisconsin's longtime NTS operators. We are holding it until next month so that we can include some additional material and a picture.

Wisconsin Nets Association Ltd.

WISCONSIN NETS

NET	WNA	FREQ	UTC	CDT	MANAGER
BWN	YES	3984	1100Z	0600	WD9IID
BEN	YES	3985	1700Z	1200	KA9RII
WSBN	YES	3985	2230Z	1730	WB9ESM
WNN	YES	3723	2300Z	1800	N9DGL
WSSN	YES	3645	2330Z	1830	N9BDL
WIN-E	YES	3662	0000Z	1900	WB9ICH
WIN-L	YES	3662	0300Z	2200	KC9CJ
NWTN	YES	34/94	2330Z	1830	W9ZZM
WCWTN	YES	31/91	2330Z	1830	KD9TT
GR.BAY	NO	72/12	0145Z	2045	WB9NRK
			THU.	WED.	

RACES NO 3993.5 1715Z 1215 WC9AAG
USB TUE. & THUR.

RACES NO 3993.5 1300Z 0800 WA90AY
LSB SUN.

Section Manager's notes



Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee WI 53221

Ozaukee Radio Club will hold its ARRL sanctioned Swapfest May 2nd starting 8 a.m. at the Circle B Recreation Center, Highway 60 and County I, north of Cedarburg. Ozaukee RC new officers: Pres. WA9USD; V. Pres. WA9JOB; Sec. AA9W; Treas. KY9P and have new Novices KA9WUG, KA9WUH, KA9WUI (XYL KY9P) and KA9WUJ.

May 16th, walk-in exams begin 9 a.m. at WCTI, 800 Main Street in Pewaukee, with WD9JKZ.

District Emergency Coordinator N9AGH would like to round up volunteers for two events that need ham radio operators: Communications and packeters needed for the Nuclear Disaster Drill coordinated for the Nuclear Power Plant at Zion to be held on June 23, 24 and 25 in southeastern Wisconsin. Also, helpers for the Wisconsin portion of the Trans American Bike Trek that begins in Washington state and ends in New Jersey. The Trek will raise funds for the American Lung Association and riders will pass through Sparta, Baraboo, Lake Mills and Milwaukee about June 28, 29 and 30.

New Emergency Coordinator for Outagamie County is WB9GBG.

WB9YCO of Kaukauna received USA-CA all counties award, wow!

ATC NK90 helped WA9OKB solve a computer monitor problem with screen filtering.

AE9H is now on packet.

KA9LOK chosen Ham of the Year and KA9TPH given special service award by Racine Megacycle Club.

New officers Madison DX Club: Pres. W9WAQ; V. Pres. N9BUS; Sec./Treas. NB9C.

Fox Cities ARC has nearly 100 enthusiastic members.

Green Fox has been renewed as Special Service Club.

CAND REPORT FOR FEBRUARY 1987 X 833 MESSAGES IN 28 SESSIONS X D9RN 100 PERCENT X WISCONSIN STATIONS N9BGE W9ODV KA9RII KC9CJ W9CBE AND W9PZP X 73 - JERRY WSKLV NM.

9RN CYCLE 4 REPORT FEBRUARY 1987 QNI 335 QTC 506 QTR 1098 IN 56 SESSIONS WISCONSIN PARTICIPATION EIGHTY NINE PERCENT STATIONS W9CBE KC9CJ W9CXY W9OND WB9ICH K9UTQ AND W9YCV 73 - PEGGY W9JUI NM.

GREEN FOX HUNTING

By Richard R. Regent, K9GDF

There's 22 Green Foxes nestled away in the wooded farmlands of Green Lake and Fond du Lac Counties. Listen carefully, hear the Green Foxes on WCWC radio? Watch closely, see a couple of pictures and a front page story of them varmints featured in the Ripon Commonwealth Press? Catch an actual glimpse of Green Foxes every third Monday at 7:30 p.m. when they gather at the Green Lake Town Hall near County Highways K and N. Then you'll know what a nice group they are, there's nothin' foxy about it.

The Green Fox Amateur Radio Club, Inc., besides making press and media coverage, spreads the word of its activities through its monthly newsletter "Foxtales." It's the one with the Green Fox logo on the front page. The Club sponsors emergency communications with the ARES, has direct liaison with the Police or Emergency Government agencies and assists the National Weather Service. Fifteen of the members are also active League members.

Foxes chat on the repeater, KB9WC/R, on 146.955/146.355 MHz, to exchange the latest news and practice formal net procedures. The net is popular in the area with more than just its members: Ripon Police officers listen with interest on a scanner; one is a ham and has joined the club. Talk about eavesdroppers, last year the repeater maintenance team found two mouse homes built near the duplexer. Even mice want to be Foxes?

You ask, "What events can the Club handle?" Five Club members helped with communications for a 10 km foot race, wearing day-glow orange vests for safety, on a highway route near Markesan. They reported to the Farmer's State Bank parking lot starting line where the evening race began. There's the Mid-Winter Cross-Country Ski Race, a 15 km event that required 5 operators. The official Race Committee was delighted with the communications and even sent the Club a thank-you card. Club members set up an operation center van at the Novatski Field EAA Chapter Fly-In to demonstrate VHF/HF QSOs and display promotional materials. Then there's Field Day at Zobel Park to check out operating and equipment and the Simulated Emergency Test (SET) to practice handling emergency messages of a fictitious tornado near Ripon - all of which assures the public that the club has active participants.

Green Lake County Fair crowds were able to ask Ham Radio questions and then were given pamphlets. If you missed the Fair, recall the two day Riponfest celebration, with television and newspaper coverage? Many visitors stopped by the

radio tent to learn how equipment works on 2 meters and the HF bands. A short tower with triband yagi and dipole aided HF operating. About the same time you could see a parade coordinated by 14 Club operators. Several volunteered to run a Special Event Station through the weekend and then to send color QSLs to contacted stations.

The Annual Club Picnic and Auction is held in Zobel Park with refreshments and activities. The plan is simple, specific picnic responsibilities are divided among all the members to bring: brats, hamburgers, hot dogs, buns, fixings, coffee maker, corn, charcoal, grills and washtubs with bottles of refreshments. Each picnicker also makes a food side dish and donates an item to be auctioned. The auction is fast and furious as bidding quickly sells transceivers, test equipment, power supplies, tubes, inductors, scanners, antennas, hand keys and parts. Finally, recreation gear goes into action: volleyball, horseshoes and frisbees.

The Christmas Party is held at Lehman's Supper Club in a family style setting. How can you spot Foxes? Just watch for their distinctive shiny Green Fox call badges. The green fox, plus black or green lettering, stands out on a silver background that is especially attractive during the holiday season.

Club training goals encourage all newcomers, 4H-ers, school youth groups and the public to learn about Hamming. The novice class has six students who are about ready to take the exam. Meeting programs have presented packet radio and other new communications modes with video tapes or guest speakers. By giving programs to other clubs in the area, at least six new operators are now on packet. A TVI Committee, registered with the FCC, is quick to respond when needed, but there have been no problems lately. Some potential satellite-dish restrictions were clarified by Club members sticking together to closely examine a nebulous ordinance. If you're serious about Green Fox hunting, here's the Club to challenge. One of the two fox hunts held last year was won in 20 minutes, proving it takes a Fox to find a fox.

Visitors and new members are always welcome. Now you know about Green Foxes and why the Special Service Club status of the Green Fox ARC has been renewed for 1987. For more information, please contact Club President Steve Loeffler, WB9ZRE, 123 Oshkosh Street, Ripon, WI 54971.

This issue has been the largest Badger State Smoke Signals that we have put together, with 20 pages, and a distribution of over 2200 copies. We will be mailing in excess of 1200 copies, and will be distributing another 1000 or more at the MARA and other swapfests.

If you receive a copy of this issue, and think it worthwhile, please look up the subscription blank elsewhere in this issue. With your support and that of the advertisers, we can continue to bring out news of interest to Badger State Amateurs.

SEE YOU AT THE MARA SWAPFEST, APRIL 15, 1987

73 de bsss staff

Unusual Trivia Quiz

Gene Santoski, K9UTQ
1220 18th Street South
Wisconsin Rapids WI 54491

1. How many ARRL Divisions are there?
2. What do the letters AFSK mean?
3. What is the bandwidth of a properly adjusted SSB signal?
4. Who is your Section Traffic Manager?
5. What is the 4th part of a message preamble?
6. What type of filter is used on a TV set to prevent RFI?
7. What is the Novice allocation on 40 meters?
8. What is the formula for determining the length (in feet) of a 1/2 wave antenna?
9. What two Indian tribes were the Heath mobile twins of the 1960s named after?
10. What does QRB mean?

MARCH TRIVIA QUIZ ANSWERS

1. Gettysburg, PA.
2. Isotropic and/or dipole.
3. D.
4. 73.
5. 3.
6. Rhombic.
7. Amateur Teleprinting Over Radio.
8. RIT/Clarifier.
9. KWM-1.
10. 50.2 - SSB; 50.7 - RTTY; 50.4 - AM.

The answers to the February Trivia Quiz are on page 6. Send your answers to this month's quiz to K9UTQ; remember, a prize will be awarded after 12 quizzes!



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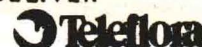
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